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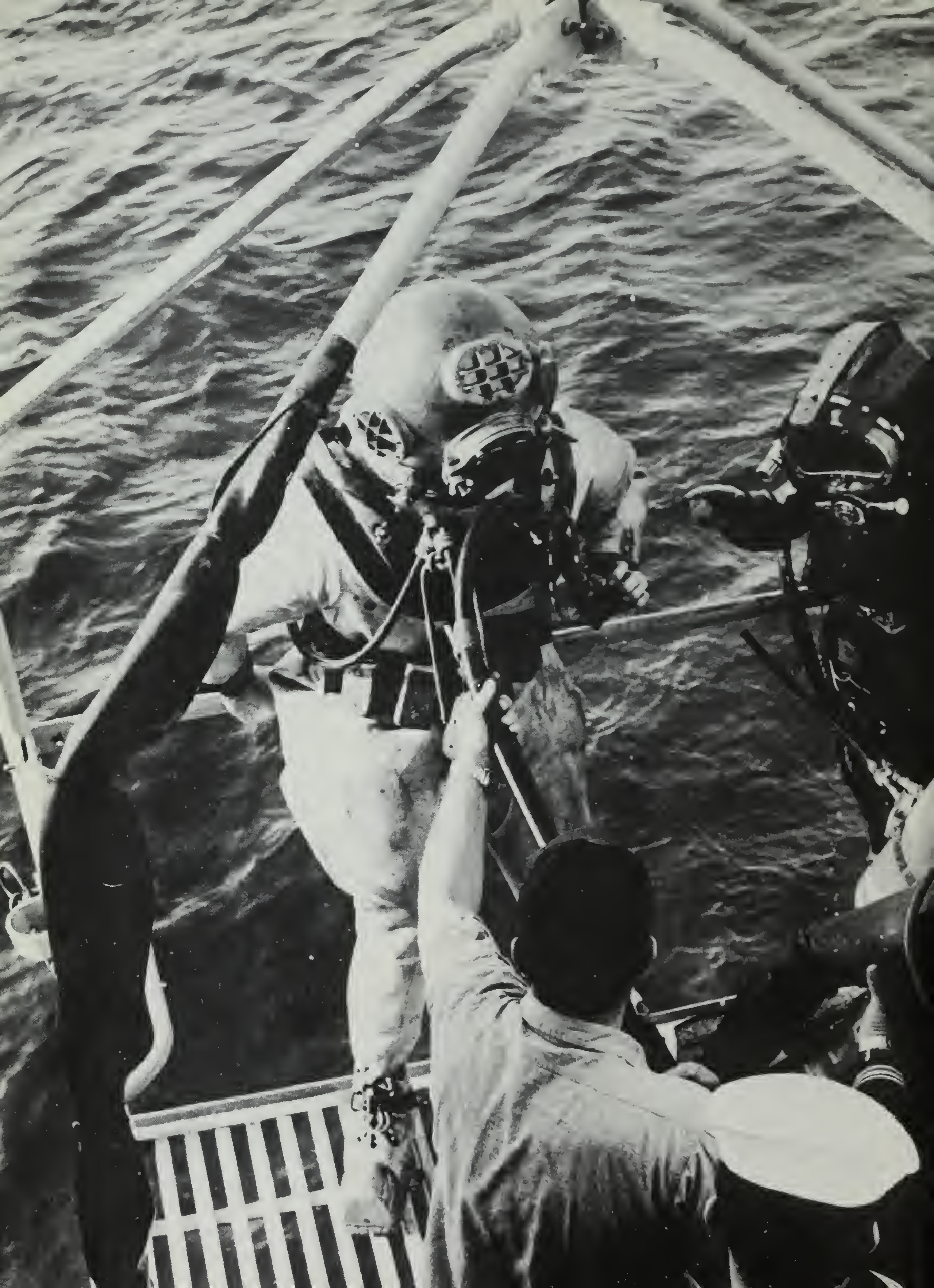

ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

JANUARY 1975 NUMBER 696

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Chief of Naval Operations
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Chief of Information
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FRONT COVER: The rules of the road are important to the traveling Navyman, whether on land or sea. Featured in this issue are vital State regulations of interest to Navy people traveling by car. A companion piece features driving safety. Front and back cover art by ALL HANDS artist Michael Tuffli.

Inside front: OCEAN ELEVATOR—Divers leave the diving stage after completing a demonstration ot one aspect ot a salvage and rescue ship's mission, operating from USS Beautort (ATS 2). Photo by J01 Larry Austin.

Profile: SECNAV

Facing page: SecNav is briefed on the F-14 by Rear Admiral Owen H. Oberg. Top photo: Ensign Middendorf. Middle photo: Secretary of the Navy Middendorf. Below: SecNav with sideboy honors aboard USS Shasta.

Within minutes after the Pacific Fleet Guest House lights came on in the predawn darkness, a tall figure stepped out into the tropic air. He took a couple of deep breaths and began jogging along the quiet Hawaiian roadside. Time was short, but there was enough to get some exercise and while at it collect thoughts about events of the coming ten days. He would be flying from ship to ship, sometimes being lowered from helicopters by rescue sling onto those without landing decks. On his agenda were visits with foreign officials and foreign ships. He would experience a catapult shot off an aircraft carrier in a supersonic fighter . . . and discuss with crewmen about things to come that will better Navy life.

That's how Secretary of the Navy J. William Middendorf II began his recent tour in the Pacific, making every minute count. It afforded him an opportunity to demonstrate his personal interest in the welfare of Navy people by meeting them face-to-face on ships and overseas shore activities and discussing such significant proposals as fleet modernization, habitability and his hope for sea pay increases.

Above: SecNav presents a "Golden Snipe Award" to the engineering division aboard USS Dixie. Right: SecNav talks with a young crewman aboard USS Lynde McCormick (DDG 8).

Since assuming the Navy's top civilian role on 10 June last year, this World War II naval officer, who likes to keep on the move, has traveled across the nation and aboard numerous ships—some in the Mediterranean, the Persian Gulf and the North Atlantic and others in the Eastern and Western Pacific.

For the fleet, it's been a chance to see SecNav in action, on the job, even to the extent of his inspecting a ship's boiler—from the inside out.

For Secretary Middendorf, it's been a time to assess, first hand, the Navy's strength around the world, an appraisal based on fewer ships and operating units than in recent years.

How does he view the strength of today's Navy?

"First of all, we are strong under the sea because we have the finest and most modern submarines," says SecNav. "Our aircraft carriers are very effective. The area of greatest concern to the Chief of Naval Operations (Admiral James L. Holloway III) and to me is in surface combatants."

The Secretary's concern stems from the number of ships that have been cut in recent years—from more than 900 to about 500.

"Consequently," he says, "we feel very strongly that there *must* be a building of the fleet back up to around 600 ships by 1980."

Does this mean the United States—which from 1962 to 1972 produced only 263 ships to the Russians' 911 ships—has slipped from its position as the Number 1 sea power?

Not at all, assures the Secretary. "There are many areas where the U. S. Navy enjoys clear superiority. These areas of leadership include sea-based airpower, amphibious assault, underway replenishment, nuclear-powered surface ships, and certain submarine capabilities."

Nevertheless, the Secretary points out, there remains a significant threat to the freedom of the seas in the Russians' increase in warship production, and at-sea operations, and the recent use of naval forces to support Russian foreign policy. Development of their *Nanuchka* class patrol boat is one example of the increase in warship capability. Although light (845 tons), this class ship is equipped with antiship missiles with 1100-pound warheads, or twice the warhead weight of the surface-to-surface missile the U. S. Navy plans for the future.

"What is perhaps most perturbing about the trend in Soviet capabilities is that it comes precisely at a time when the United States and the free world have become increasingly dependent upon raw materials imported across the seas," says SecNav.

What are some significant U. S. developments?

"We will begin to '*Harpoonize*' (referring to the *Harpoon* antiship or cruise missile system) the fleet this year, a program that should be complete by 1980 or 1981," says Mr. Middendorf. "We have great aircraft carriers and our aircraft are second to none—with fighters like the F-14 *Tomcat*."

Among other research developments the Secretary hopes to include in the Navy's arsenal is the surface effect ship—a concept he believes will be proven. He also looks forward to seeing someday a 100-knot Navy; test models have already reached 80 knots (approximately 92 mph).

Secretary Middendorf would like to see included, among other surface combatants, new medium- or full-size carriers and an increase in nuclear-powered ships, if Congress will provide funds.

With his background in naval engineering (he's the first SecNav to hold a degree in naval science), Mr. Middendorf takes special interest in the Navy's ability to power its ships. As Under Secretary of the Navy (and wearing a second hat as the head of the Navy's energy council) from October 1973 to April 1974, he visited the destroyer USS *Johnston* to witness firsthand the use of liquid coal as a ship's primary propellant.

Visits like the one to *Johnston* are Secretary Middendorf's way of keeping on top of things. His visit to the Mediterranean early last fall also afforded him an opportunity to visit Navy ships in the Mideast and personally meet with crewmen of the U. S. Sixth Fleet and Middle East Force.

His keen appreciation of the performance of ships' engineers and the jobs they do led the Secretary during his ship visits to give top priority to a tour of engineering spaces. In fact, he had a plaque created in honor of the "snipes,"—the firemen, boiler technicians and other engineering ratings who serve in the deepest and hottest parts of the ships.

The plaque, "The Order of the Golden Snipe," is personally presented to those personnel in each of the ships whose spaces he visits. First to be enrolled in the Order of the Golden Snipe were the destroyer escort USS *Aylwin* (DE 1081) and the destroyer USS *Hawkins* (DD 873) in Bahrain last September. The Secretary visited these ships coincident with a meeting with government officials and military leaders in the Med and the Mideast. (Both *Aylwin* and *Hawkins*, homeported in Norfolk, were part of the Navy's Middle East Force.) At the time of the visit, the outside temperature in Bahrain was 108 degrees; humidity was at the 90 per cent mark. In the firerooms of the 30-year-old *Hawkins*, the Secretary of the Navy noted, the temperature was 135 degrees.

SecNav tried to meet each man in *Hawkins'* engineering gang. "They are proud of their ship—and they should be," he said. "They currently hold three 'E' awards."

Other ships visited by Secretary Middendorf during the Sixth Fleet tour and presented with the Golden Snipe Order were the Sixth Fleet flagship USS *Little Rock* (CLG 4), USS *Independence* (CVA 62), USS *Inchon* (LPH 12), USS *Coronado* (LPD 11), USS *Trenton* (LPD 14), USS *Spiegel Grove* (LSD 32), USS *Saginaw* (LST 1188), and USS *Garcia* (DE 1040). In addition, during an inspection visit to two utility landing craft—LCU 1658 and LCU 1649—the Secretary reminisced over the characteristics of the support landing craft LCS 58 in which he served in the Pacific in 1945-46 as engineer and communications officer. After comparing notes, he presented "snipe" plaques to skippers BMC Leland Keith and BMC Thomas Wood.

At Holy Loch, Scotland, the submarine tender USS *Canopus* (AS 34) and the fleet ballistic missile submarine USS *Tecumseh* (SSBN 628) received Secretary

Left: SecNav Middendorf with CNO Admiral Holloway and Commandant of the Marine Corps General Cushman. Below: In the wardroom aboard USS Peary.

Middendorf and were made part of the Golden Snipe team.

During a visit with units of the Pacific Fleet, the Secretary toured installations in Hawaii, Guam, Saipan, Okinawa and the Republics of the Philippines and South Vietnam.

Tour highlights include a flight in the F-14 *Tomcat* fighter aircraft from the deck of the nuclear-powered aircraft carrier USS *Enterprise* (CVAN 65), operating in the South China Sea, and presentation of medals and citations to former prisoners of war in Vietnam. One recipient, CAPT Howard E. Rutledge, USN, commanding officer of NAS Cubi Point, was decorated with 10 awards, including three Silver Stars, a Legion of Merit, six Bronze Stars for heroic actions and meritorious conduct during his more than seven years as a POW. CDR Gordon Nakagawa, commanding officer of Attack Squadron 196, received two Bronze Stars and a Navy Commendation Medal during SecNav's visit to the Enterprise. While at Camp Smith, Hawaii, Mr.

Middendorf decorated former POW Marine CWO3 William E. Thomas, Jr., with a bronze star.

Secretary Middendorf also toured three South Vietnamese Navy ships during his southeast Asia tour and paid visits to the following PacFlt ships:

- Destroyers USS *Morton* (DD 948), *Richard S. Edwards* (DD 950), *Gurke* (DD 783), *Rowan* (DD 782) and *Agerholm* (DD 826). Destroyer escorts *Rathburne* (DE 1057), *Harold E. Holt* (DE 1074), *Robert E. Peary* (DE 1073) and *Hepburn* (DE 1055). Guided missile destroyers USS *Somers* (DDG 34), *Decatur* (DDG 31), *Robinson* (DDG 12) and *Lynde McCormick* (DDG 8). Destroyer tenders USS *Bryce Canyon* (AD 36) and *Dixie* (AD 14).
- Fleet ballistic missile nuclear submarines USS *Ethan Allen* (SSBN 608), *Robert E. Lee* (SSBN 601) and *Abraham Lincoln* (SSBN 602). Nuclear submarines USS *Flasher* (SSN 613), *Tautog* (SSN 639), *Aspro* (SSN 648) and *Seadragon* (SSN 584). Fleet submarine USS *Blueback* (SS 581). Submarine tender USS *Proteus* (AS 19).
- Nuclear-powered attack carrier USS *Enterprise* (CVAN 65) and attack aircraft carrier USS *Midway* (CVA 41).
- Amphibious assault ship USS *Tripoli* (LPH 10). Amphibious transport dock USS *Ogden* (LPD 5). Amphibious transport submarine USS *Grayback* (LPSS 574). Tank landing ship USS *Fresno* (LST 1182).
- Patrol gunboats USS *Canon* (PG 90) and *Gallup* (PG 85).
- Oilers USS *Kawishiwi* (AO 146) and *Guadalupe* (AO 32). Ammunition ships USS *Shasta* (AE 33) and *Pyro* (AE 24). Combat stores ship USS *San Jose* (AFS 7). Salvage and rescue ship USS *Brunswick* (ATS 3). Replenishment fleet oiler USS *Kansas City* (AOR 3). Fleet tugs USS *Takelma* (ATF 113), *Moctobi* (ATF 105) and *Molala* (ATF 106).

One of the Vietnamese ships visited by SecNav was former LCS 96, sister ship to the landing craft on which he served. As a gesture of good will, Mr. Middendorf presented a Golden Snipe plaque to the Vietnamese crew. Altogether, SecNav has visited more than 80 U.S. ships (plus five foreign ships) since joining the Navy secretariat.

The Secretary's attention is focused on shore establishment needs and efforts as well, and he manages to visit U. S. activities as often as possible and also meet with civic Navy supporters.

He was present, for example, in Philadelphia during the anniversary celebration last year on board the historic cruiser *Olympia* in which a cabin, restored by U.S. Navy Olympia Sea Cadets, had been dedicated in his name. Later, he joined in honoring the military Wives of the Year in Washington, D. C., meeting with Navy Wife Kathleen Parker O'Beirne, and Marine Corps Wife Mary "Terry" Courtney.

Keeping informed of modern naval technology, the Secretary has visited Navy's research labs. At the Dahlgren, Va., Naval Surface Weapons Center, he viewed current research and development programs in weaponry, including the Navy mini RPV, a ship deployable tactical airborne remotely piloted vehicle (STAR).

Secretary Middendorf, with a background in finance and diplomacy (he was Ambassador to the Netherlands from 1969 to 1973), has a reputation for a sense of humor, which was pointed up during a recent visit to Jacksonville, Fla. He had just received the city's keys, along with a frisbee labeled "Sailors Have More Fun." He sailed it into the audience, announcing that whoever returned it would receive his gold Navy cuff links. The young man who caught the Secretary's pitch received the links—and also an invitation to raise his hand and enlist on the spot.

Interested in today's youth and, in turn, in their interest in the Navy, he was on hand recently in Richmond to swear in an 83-man All-Virginia Recruit Company.

There's another side to Secretary Middendorf—which ranges from an interest in baseball to symphonic music. (Some 30 years ago he was invited by the New York Giants to attend their training camp and try out for the team as a pitcher, but he opted to join the Navy instead.) In the field of music, he's a composer of five symphonies, two concertos and a piano sonata, in addition to five marches (he's working on his sixth, a bicentennial piece). A stained glass window he designed hangs in a church in the Netherlands. He also paints (on porcelain). He collects works of art, including paintings that are on loan to several museums, and manuscripts written by the poet, Robert Frost.

It was while he was Ambassador to the Netherlands that he seriously undertook composing music. Under the tutelage of a music scholar, Somtow Sucharitkul, son of the Thai Ambassador to the Netherlands, Mr. Middendorf worked on a symphony which he described as "an exercise in discipline." Completed as "The Holland Symphony," he dedicated it to Queen Juliana and the Dutch people, and it was played by the Dutch national symphony orchestra on a nationwide broadcast.

One of his most recent symphonies, "The Navy Suite," contains five selections: The Fleet's Underway; A Sailor's Hornpipe; The Navy Wives Waltz; Moon Watch to Pearl; and the Navy Triumphal March.

Mr. Middendorf became Secretary of the Navy after serving as Under Secretary. In both capacities he has been vitally concerned with informing others, both in and out of the Navy, about the Navy's mission and its needs in the areas of people, money and material. Two primary goals while he is Secretary are to maintain a 100 per cent recruitment figure and to work toward the development of a modern, 600-ship fleet.

In striving to ensure that the U. S. Navy remains the world's first sea power, he reminds all that "When diplomacy and deterrence must act simultaneously, or when our nation must act alone, there is simply no substitute for the flexibility and mobility of naval forces operating on the high seas."

It is his belief that "today's peace rests upon today's strength, and tomorrow's peace upon tomorrow's strength."

—JOC Marc Whetstone, USN

MM2 Edward C. Blood sails in the FASTEST SHIP IN THE FLEET

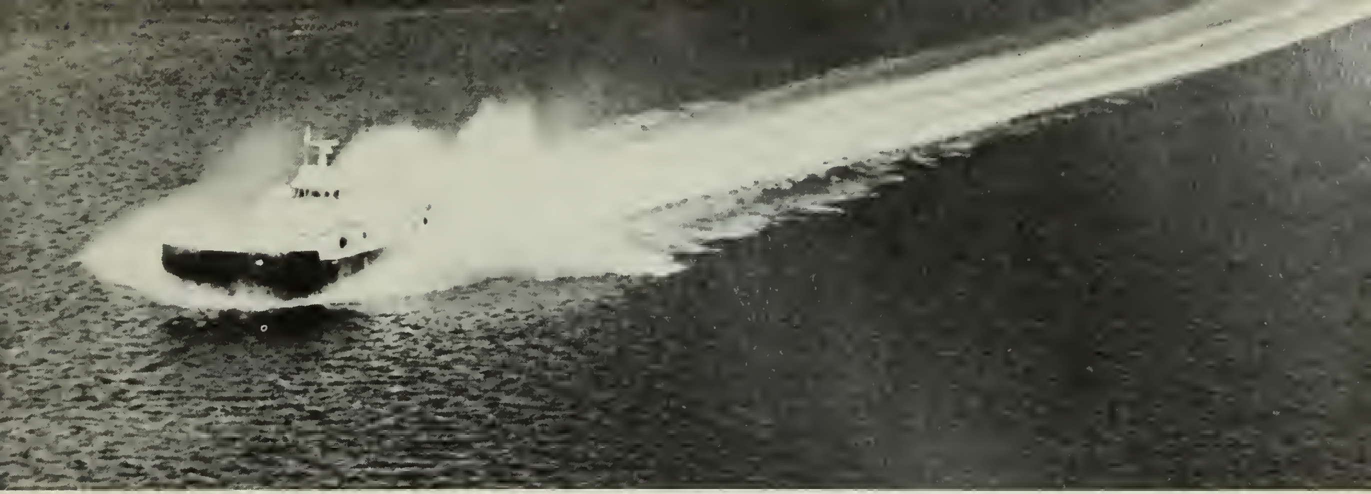
"At 70 knots the ride is so smooth that you can stand up and drink a cup of coffee in the cabin," says the five-foot, six-inch crewman aboard the new Surface Effect Ship, SES 100B, in Panama City, Fla. Machinist's Mate 2nd Class Edward C. Blood has become the first enlisted crewmember aboard the Navy's fastest surface vessel.

A surface effect ship that is now reaching speeds of over 75 knots, SES 100B is pointing the way toward a potential 100-knot navy by the year 2000. The 100B test craft demonstrates the captured air bubble concept for ships of multithousand-ton size. A crew significantly smaller than ships of equal tonnage mans the 100-ton SES.

"Underway, I'm the man-on-deck," says Blood, a nine-year Navyman. In fact, he's the only underway enlisted crewmember aboard the SES.

"It's my responsibility to ensure all engine compartments are clear and when the craft commander starts the engines, I go below and inspect for leaks and fire

Left: Many of MM2 Ed Blood's duties are below deck. Top right: Surface Effect Ship making a high-speed run. Bottom right: Petty Officer Blood on the bridge of SES 100B.



hazards," he says, in a matter-of-fact voice.

Before getting underway, the man on deck must perform all pre-start checks on all the ship's compartments which contain lift engines, propulsion engines, auxiliary machinery, transmissions and hydraulic systems. "If an engine needs changing, my men and I must do all the disconnecting and make ready for the change, then make all connections to the new engine," he says.

Duty aboard the SES is somewhat different from assignments the young petty officer had in the Republic of Vietnam. Because of the experience in small boat repair he had gained while serving in Guantanamo Bay, Cuba, he was first assigned to do repair work at Da Nang and later assigned to a Harbor Utility Craft (YFU) where he performed general "snipe" duties. A subsequent reassignment led him to a utility landing craft (LCU) which was tasked with running supplies from Da Nang to Chu Lai.

Machinist's Mate Blood left Vietnam and was assigned to a precommissioning detail for USS *Hewes* (DE 1078) in Newport, R. I. It was here that he was promoted to E-5, then transferred to USS *Luce* (DLG 7) for another pre-com detail. He made a shakedown cruise to Guantanamo and then swapped duty with an MM2 aboard USS *Biddle* (DLG 34) in Norfolk, Va. Aboard *Biddle*, Blood returned to Vietnam and the

Tonkin Gulf.

After a nine-month tour in WestPac, he returned stateside only to learn of his eligibility for shore duty.

"I called my detailer to ask what was available," Blood says, "and his reply was that there were two billets on the west coast and one on the east coast at SESTF. I asked him what that was and he said he didn't have the slightest idea."

But it was the east coast and that was where Blood wanted to go, so he volunteered for duty with the Surface Effect Ship Test Facility in Patuxent River, Md. "Once I found out what the assignment was going to be like, I really looked forward to it," he said. "I wanted the experience of working on something new."

Once assigned to the SESTF, Blood underwent two months of indoctrination of which five weeks was training in jet aircraft engines. "This training, for the most part, really helped, but a good part of the SES indoctrination was obsolete—by the time I first reported aboard the boat in Panama City, everything had changed."

"The Navy has a valuable resource in Blood," says Lieutenant (jg) Tom Breitinger, prospective commanding officer of the 100B. "He has worked night and day on this project, learning the boat inside and out. Now if any casualty arises, he can check it out immediately and probably will have anticipated the problem."

—Story and photos by PH1 Richard A. Pendergist

Surface Effect Ships...

Profile of the SES

In the future, a lot of Navy crewmembers will be "walking on air." They won't necessarily be in love or in some other state of euphoria—they'll be riding some of the world's fastest ships, the Surface Effect Ships.

Like the Navy's famed high speed hydrofoil craft, the SES is based on the phenomenon known as "hydrodynamic lift." But the application of hydrodynamics, which is a branch of science that deals with the motion of fluids and the forces acting on solid objects in water, is only one part of the Navy's plans for new high performance ships. The other, and equally dramatic, part of the plans is based on the principle of "aerostatic lift."

Aerostatics deals with gases (in this case, air) and the action of solid bodies immersed in the air. The application of aerostatic lift results in the creation of an "air-lubricated" device, or one in which the drag is greatly lessened, thus speed could be greatly increased.

SES refers to an air-lubricated vehicle with solid sidewalls attached to its hull. Air-cushion vehicle means one with flexible "skirts" attached.

Surface effect ships are thus supported on cushions of air, internally generated. This cushion is captured by fixed sidewalls plus flexible seals fore and aft. The

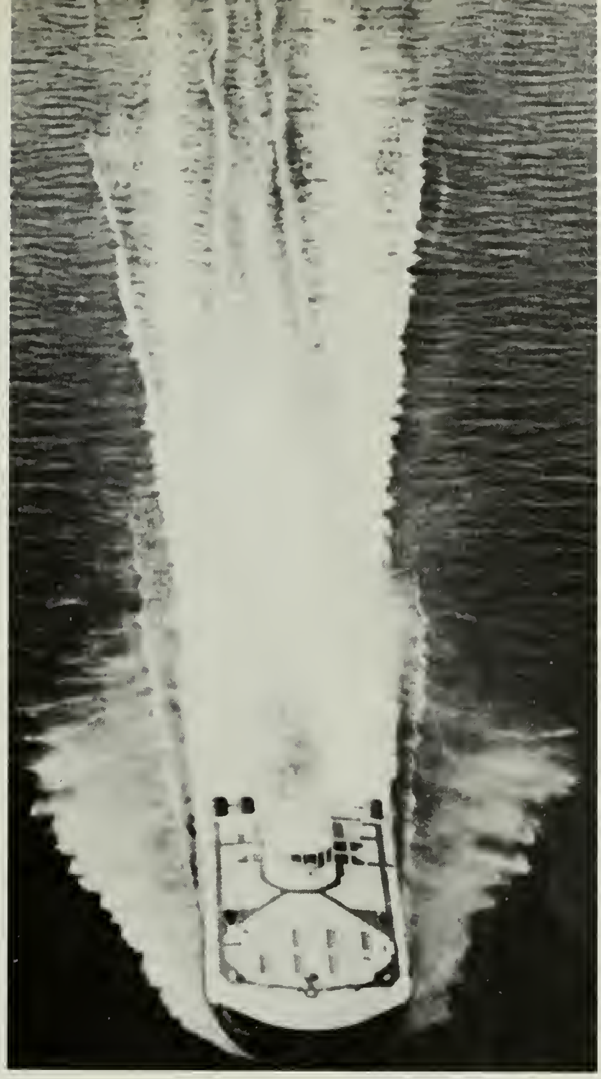
result is much less drag than that experienced by conventional hulls propelling at high speeds through the water. The SES does, of course, experience displacement and wave drag at low speeds, but as the speed increases, it diminishes displacement and associated drag. The drag that remains is primarily aerodynamic and "wetted surface" drag.

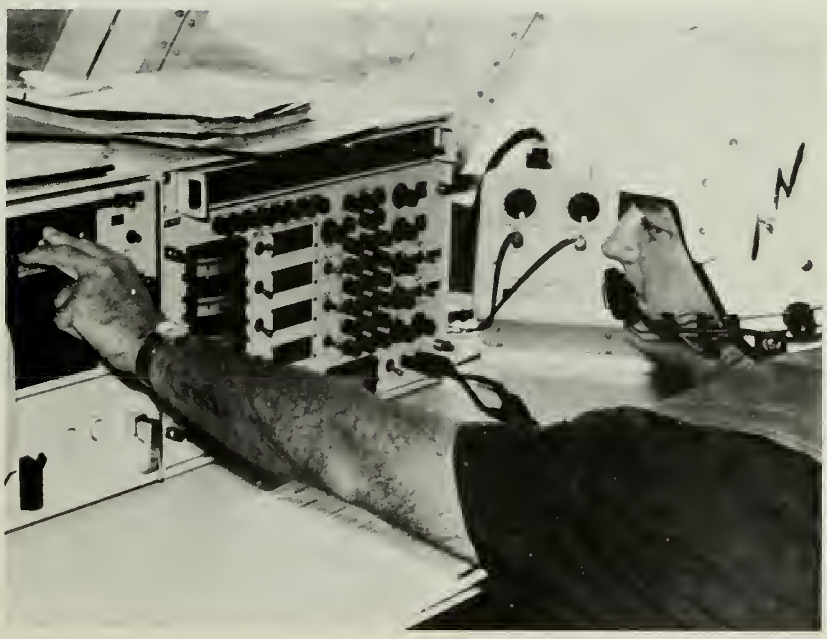
Potential missions include antisubmarine and antiaircraft warfare, surface warfare, tactical air support, and amphibious assault. As with all transportation vehicles which have emerged through history, the most promising applications of SES remain to be established.

The Navy is now working with two 100-ton craft of this type, each built by a different contractor. The SES 100A has exceeded 75 knots, and the SES 100B reached a world record 80 knots last spring. Both are about 80 feet long with a beam of about 40 feet. The two craft have given increased assurance of success and have permitted data to be obtained very effectively. At the same time, alternative design features are being evaluated, particularly propulsion systems and seal designs.

Even more so than the hydrofoil, the SES offers speed as her primary asset—and this is considered a blessing by those who must worry about antisubmarine warfare. A 2000-ton destroyer type SES could cover three times the area of the present-day destroyers and deliver an antisubmarine helicopter to a specific spot in minutes. With such speed, this type of SES could outrun any torpedo launched against it.

The program's objective is to extend this existing state of the art to ships of oceangoing size with military capability—ships with adequate range, speed and seakeeping characteristics. The Navy plans to acquire and operate prototype ships to evaluate concepts for future ship construction and to develop mission applications and logistics concepts. As a result, the prototypes will be fitted with weapons and sensors to complement their high-speed capabilities. Such development also will establish an industrial base for future shipbuilding.





Left and top right: SES 100B during recent high-speed tests. Bottom right: Test engineer works at the Data Acquisition Console of SES 100B during test mission.

WILES FAMILY GOES NAVY

Five of a Kind

It's all in the family, the Navy tradition of the Wiles family of Waterloo, Iowa, that is. With three brothers and one sister already in the Navy, Leatha Mae, the youngest of the five Wiles children, decided she wasn't going to be left standing ashore. In a special Navy Birthday ceremony at Waterloo City Hall she became the fifth Wiles to join up.

Waterloo, Iowa, you may remember, was the hometown of the five Sullivan brothers who perished together during World War II. The Wileses are the second family from this small town to have five members in the Navy at the same time.

Leatha Mae says her brothers and sister were a big influence in her choosing the Navy. "All of them seem to be enjoying their assignments with the Navy," she said, "so I thought I'd join them." Leatha left Waterloo immediately following the ceremony for recruit training in Orlando, Fla., and plans to enter the data processing field.

Her older brothers, Jack, Jr. and Albert, are Aviation Structural Mechanics working together on rescue helicopters at Naval Air Station, Pensacola. They are members of the Search and Rescue (SAR) Detachment there, which is responsible for tracking and rescuing downed aviators and making hurricane observations.

Jack has been an aircrewman for five years and has the medical evacuation of a premature baby to his credit. Albert joined his brother at Pensacola in 1972 and has recently earned his wings as a helicopter rescue aircrewman.

The sister-brother team of Personnelmen Anthony and Arliss Wiles works together in the Military Personnel Office of Roosevelt Roads Naval Station, Puerto Rico.

Tony enlisted in the active Navy after two years in the NROTC unit at Iowa State University. He enjoys his assignment in Puerto Rico and spends his spare time there umpiring high school and intramural baseball games and refereeing high school football contests.

Arliss joined Tony in Puerto Rico after graduation

from personnelman school. She says teasingly that she works "*in* Tony's office but not *for* him! I am undecided about the Navy as a career," she said, "but I've enjoyed my tour so far—especially the travel. I like Puerto Rico because of the fun things to do and the interesting sights around the island." She spends a lot of time swimming in the warm Caribbean waters and playing tennis.

When Leatha Mae joined her brothers and sister in the Fleet, she knew she would be the only Wiles without a family member for a partner, although she says she would like to join Tony and Arliss in Puerto Rico. If Jack Wiles can fulfill his ambition, that may change. He'd like to get all his sisters and brothers to join him at Pensacola. This would bring their entire Navy family under one command, thus equaling the record of the famous Sullivan brothers from the Wileses' home town.

—LT Joey Schaefer

Left: Albert Wiles replaces a tail rotor blade. Far left: Jack (left) and his brother Albert sometimes work together on helicopters at NAS Pensacola. Photos by L. Randall. Above: It was a regular hometown reunion when Rear Admiral James Ramage, Commander, Caribbean Sea Frontier, discovered that Arliss and Anthony Wiles were also from Waterloo, Iowa, his hometown. Photo by PH1 Graves. Bottom: Governor Ray of Iowa pins a corsage on Leatha Mae, youngest of the Wiles children, after her enlistment bringing the total to five Wileses on active Navy duty.

Getting Up In The World

The Navy could almost make an advertising poster out of it: A tour on USS *Midway* will help make you a mountain climber.

If that doesn't ring true, doubters need only talk with some of the 3500-man *Midway* crew. Since the carrier arrived in the Far East more than a year ago, hundreds of her sailors have climbed Mt. Fuji, Japan's highest mountain.

The most recent were four aerographer's mates and a photographic intelligenceman. The quintet, who had been bounding up and down *Midway* ladders for more than a year, hiked up the 12,395-foot mountain at the end of the year's climbing season.

"I can't say it was equal to scaling Mt. Everest or anything like that," said Aerographer's Mate 3rd Class Dale Hawkins. He knows of a 91-year-old Japanese who also successfully reached Fuji's summit.

Nevertheless, the climb called for more huffing and puffing than Hawkins and the others usually expend reaching their offices in *Midway's* island structure.

The five men made their climb during one of *Midway's* frequent calls to her home port in Yokosuka. Although 40 miles away, Mt. Fuji is visible on a clear day from many parts of the base. Perhaps that's why so many *Midway* men have climbed it; Fuji is an undeniable dare staring them in the face.

Hawkins and the others, Aerographer's Mate 1st Class Steven Quesnel, Aerographer's Mate 3rd Class James R. Crowe, Photographic Intelligenceman 1st Class Harry H. Dozier, Jr., and Airman Apprentice Frank Arriaga, took a bus from the naval base to Fuji's fifth station, halfway up the volcanic peak. From there, they joined hundreds of other American and Japanese climbers on the trail to the top.

"It was interesting for us weathermen," Quesnel said, "especially when we were in the clouds at the 10,000-foot level."

The *Midway* men rested at the eighth station, about 2000 feet from the summit. The station, a cluster of stone huts offering food and shelter, is the traditional early-morning starting point from which to reach the top in time to watch the sun climb up over the horizon.

"The Japanese put great stock in seeing the sunrise from the top of Mt. Fuji," Crowe said, "It's just about the whole reason they climb."

Crowe, who took some time to read about the mountain before climbing, can also reel off other facts, like: The most celebrated mountain in Japan is a volcano that has been dormant for over two centuries, but old records indicate Japanese have been scaling its heights for a thousand years. And, since the Japanese long regarded the mountain as sacred, even as late as 1886 no women were allowed to climb it.

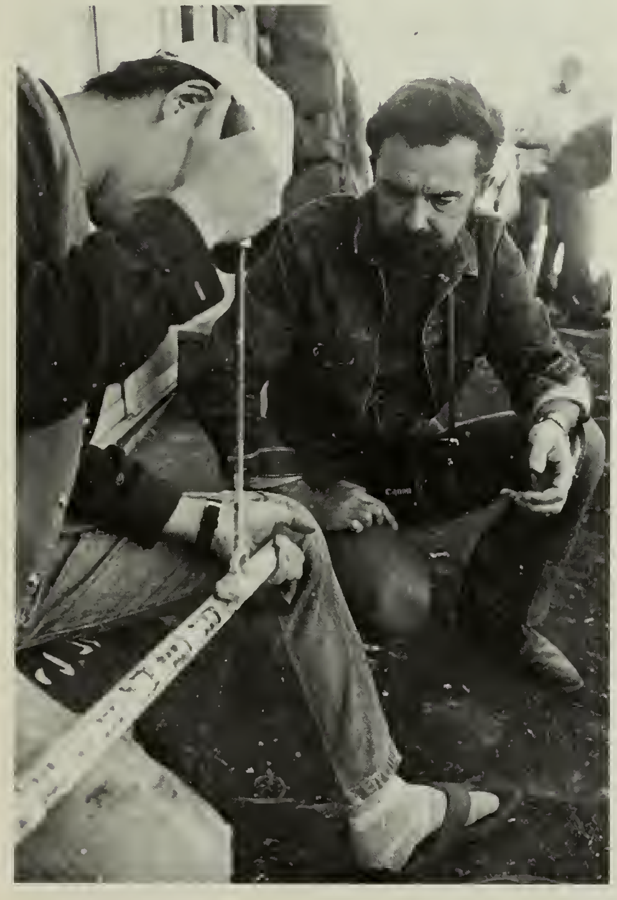
Unfortunately for the climbers, all the mountain's history and mystery remained hidden behind torrential rains with high winds that lashed them when they reached the top that day.

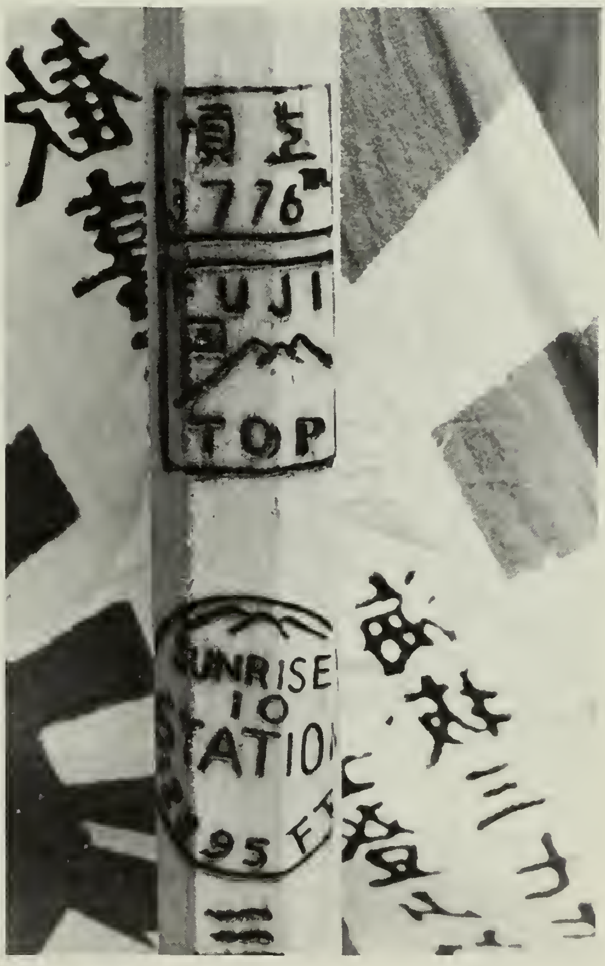
"We really got washed out at the top," said Arriaga, recalling the swirling clouds pushed by 50-mph winds cresting the summit. Another climber recalled, "the rain came at us sideways, straight into the face."

After conquering the summit, the only view the sailors got was one of numbed fingers pulling crumbling lava and ash from wet socks.

"I was disappointed," Arriaga said after returning to the ship. "You walk two miles up a mountain like that and you expect to see something." But he plans to climb it again next year, and so do the others. After all, one of them said, it isn't too hard. It's sort of like climbing from *Midway's* hangar deck to the 0-7 level—800 times.

LEFT: Climbing to the top. Facing page top: Admiring their souvenir walking sticks are (left to right) Photographic Intelligenceman 1st Class Harry Dozier, Jr., Aerographer's Mate 1st Class Steven Quesnel, Airman Apprentice Frank Arriaga, and Aerographer's Mates 3rd Class James Crowe and Dale Hawkins. Bottom left: Another mark, signifying the reaching of one of Fuji's 10 stations, is burned into Quesnel's walking stick. Right: Successful climbers are rewarded with coveted brand from station ten at the summit of Mt. Fuji.




頂上
3776m
FUJI
TOP
SUNRISE
10
STATION

USS HITCHITI

" . . . An ATF is not a pretty ship, but she is a performer, especially in an emergency, with a proud crew . . . "

Three short blasts, a modest swirl by the stern, a rumbling barely discernible as the screw reacted to a back bell and USS *Hitchiti* (ATF 103) moved easily into the channel. On the bridge the skipper, Lieutenant Gordon L. Wood, Jr., observed as his bridge team went through the familiar routine. After more than 30 years of commissioned service, *Hitchiti's* comings and goings weren't apt to attract much attention.

An ATF is not a pretty ship. It lies somewhere between an oversize tugboat and a variety of waterbug. To heighten this impression on this particular morning, *Hitchiti* steamed in company with five sleek PGs. These smaller vessels slipped through the water with shark-like grace and a hint of menace. To an observer on shore, parallels between *Hitchiti* and the ugly duckling might have seemed appropriate, but on board the metaphor remained unspoken.

The mission: to escort five PGs from San Diego, Calif., to Rodman Naval Base in the Panama Canal Zone, providing support as circumstances indicated.

The ATF a support ship for PGs? The idea was novel and promised an interesting meeting of old and new.

The very newness of the concept presented the possibility of heretofore undealt with problems. To a great degree the success of the mission depended on *Hitchiti's* ability to employ seaman's eye, intelligent improvisation and good common sense in the event her services were called upon.

For four days *Hitchiti* and company steamed south. A brilliant sun and glasslike ocean surface lent a holiday atmosphere as each crew went about the at-sea routine. On the fifth day the spell was broken. The PGs were using more fuel than planned. Circumstances dictated underway replenishment.

There is nothing new about refueling at sea. For destroyer sailors the evolution is as familiar as the coming of the mailman. But this was a special case. The technique of ATF refueling PG was as yet untried.

Fortunately there were no incidents to spoil that day. The PGs slipped alongside, drank their fill then moved back into station. On board *Hitchiti* an exhausted crew settled down to evening chow joking about the exploits of the newly christened ATF-AO. Somehow the possibility of more excitement on the same day seemed remote.

But it was only a matter of hours. At approximately 2130 the word came down: "Away the towing and salvage detail." One of the PGs had had bearing trouble and its starboard shaft was secured. Circumstances dictated rigging for tow. It was dark and the crew was tired but this time *Hitchiti* was the expert—if it floated, she could tow it. All was secured before the mid.

The next few days were not uneventful, but then a port call in Acapulco never is. However, all too soon

Facing page left: Motor whaleboat is lowered to carry divers to disabled patrol gunboat. Right: Deck gang of disabled PG secures line as their ship is taken in tow. Right: USS Hitchiti (ATF 103). Bottom: Hitchiti prepares to refuel patrol gunboat. Below: LT Gordon L. Wood, Jr., skipper of Hitchiti.

the vacation was over. *Hitchiti*, her guest streaming 500 feet astern, and the four remaining PGs pushed south on the final leg of the journey.

Demands on a support vessel aren't always as dramatic as taking another ship under tow or refueling at sea. There are hundreds of internal operations necessary to the proper functioning of every ship that demand immediate attention when difficulties arise. Almost from the day the ships left San Diego, *Hitchiti* was tasked with providing technical and communications support for the entire task unit. Playing the role of a much larger vessel, *Hitchiti's* radio gang took on the job of screening, receiving and transmitting traffic for the PGs while her ETs provided on-site technical assistance.

Four days before landfall at Rodman, one PG in tow, again the word was passed: "Station the towing and salvage detail." A second PG had knuckled under to mechanical difficulties. Circumstances dictated taking another ship under tow.

Two days later there were two PGs in tow and the word came: "It is requested that divers of USS *Hitchiti* make an underwater inspection of and take measurements of disabled PG's starboard shaft." The water was 6000 feet deep and sky blue, the shark guard was set. The required information was promptly provided.

Seventeen days and 2300 miles after departing San Diego, the odyssey ended. The PGs' arrival at Rodman meant a few days rest and repair before continuing their journey into the Atlantic. For *Hitchiti* it meant a few hours, just enough time for the crew to stock up on candy, for the ship to take on fuel and supplies, and for her divers to make a final inspection of a PG strut bearing. Before nightfall, *Hitchiti* was on her way home.

"Moored, shift colors!" *Hitchiti's* return was as minus fanfare as her departure, fully one month before. A modest group of wives and children waited patiently on the pier while customs agents completed the necessary paperwork. Within an hour she was deserted except for the regular inport watch.

It had been a busy month. *Hitchiti* had played the part of refueling vessel, towing ship, communications and electronic support ship, and diving platform. After 30 years' commissioned service, she could still do the job with some impressive extras thrown in. Somehow, in this day and age, that says a whole lot about a ship and a whole lot about the Navy.

—Story by ENS Robert T. Duddy
Photos by ENS Donald Wiley

U.S. -Venezuelan Team Operation
VENUS III

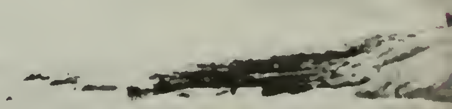
Mission: Hemispheric defense. Objective: Offensive surface-to-surface missile sites. These were the purposes of a joint U. S.-Venezuelan amphibious task force, code named "Venus III," in a training exercise conducted in the Caribbean.

Initially, USS *Shreveport* (LPD 12), USS *Austin* (LPD 4), USS *Pensacola* (LSD 38) and USS *Manitowoc* (LST 1180) offloaded U. S. and Venezuelan Marines, tanks and cargo vehicles onto landing craft in preparation for the beach assault. The Venezuelan landing ship ARV *Amazonas* released its load of 10 armored landing vehicles which were quickly filled with combat-ready Venezuelan Marines and driven by U. S. Marines.

Meanwhile, two Venezuelan destroyers, ARV *Falcon* and ARV *Nueva Esparta*, and one submarine, ARV *Picua*, protected the landing force from sea attack as the beach was being taken by the invading forces.

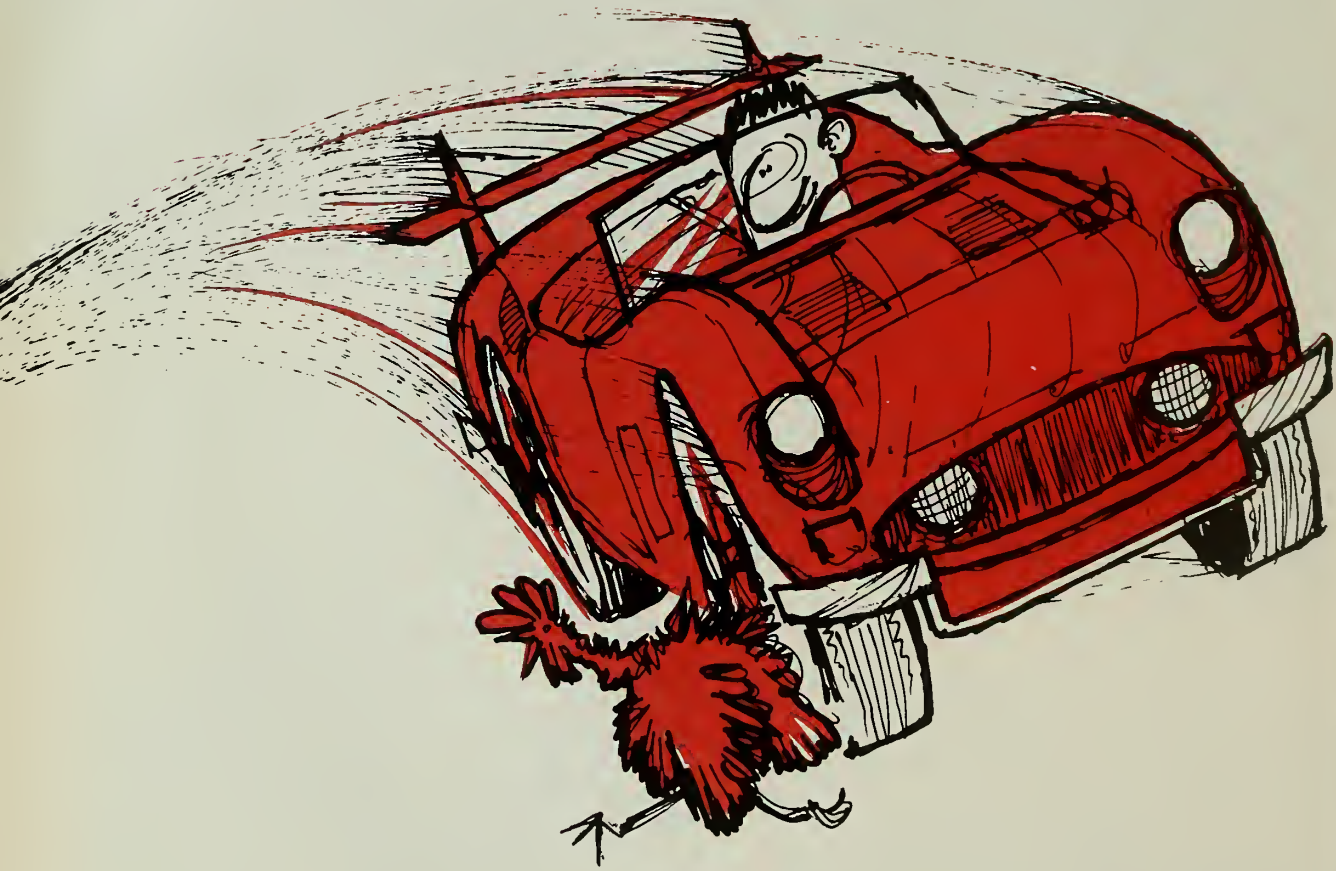
The bi-American training exercise, commanded by Captain C. V. Merrell, Amphibious Squadron Two, originated from a joint U. S.-Venezuelan conference designed to provide for multifacet amphibious training.

Many phases of training involving logistics, equipment and general amphibious tactics were covered during the "Venus III" exercise. This valuable training under realistic conditions gave both forces needed experience in making hemispheric defense a stronger reality.



Facing page: A Seasprite Helicopter prepares to lift off from deck of USS Pensacola (LSD 38). Below: In the misty light of early morning, U. S. and Venezuelan marines "hit the beach." Above: Tracked Personnel Landing Vehicles (LVTP 7) move ashore with cargo of marines. Right: Venezuelan sailors are welcomed aboard the tank landing ship USS Manitowoc (LST 1180). Photos by PH3 Thomas L. Blasingame, PHC C. L. Bassi and PH2 William F. Nanny.

SAFE SAILING ON THE NATION'S HIGHWAYS



How would you feel if someone told you that all the people in the entire state of Oregon had been injured or killed in an accident? You'd be horrified; yet, that's about how many people are killed or injured each year on the nation's highways.

No one seems to be appalled enough to stop this. The fact is, in the 17 million traffic accidents in the United States each year, there are over 56,000 deaths, 3 million injuries and 170,000 permanent disabilities.

The Navy's traffic safety record is little better. According to the Naval Safety Center, 1973 saw 315 Navy members lose their lives and another 1867 injured in motor vehicle accidents. This accounts for 70 per cent, repeat 70 per cent, of *all* Navy accidental deaths each year. Privately owned vehicles (POVs) are involved in 98 per cent of the Navy's traffic accidents and a significant number are driven by those between the ages of 19 and 22.

Traffic accidents continue to be the Navy's number one safety problem. Navy POV fatalities were down in 1974, but the reduction percentage was not as great as that in the nation as a whole.

Accidents happen for a number of reasons: poor mechanical condition of vehicles, speed, bad weather, driver error, drinking, or a combination of these. Be that as it may, national statistics show that most accidents happen to the average driver of an ordinary automobile on a clear day. Eighty-five per cent of all traffic accidents are caused by driver error. The next greatest cause is drinking and driving, with 50 per cent of all traffic fatalities involving alcohol. The question is not what causes accidents, but rather what can one do to avoid them.

- The first step is seeing that your vehicle is safe. National Highway Traffic Safety Administration (NHTSA) feels that good vehicle mechanical condition is so important that it requires individual states to have a periodic motor vehicle inspection program in order to qualify for Highway Safety Program funds. If your state doesn't have such an inspection program it is a good idea to have it done on your own. Have your mechanic pay particular attention to brakes, suspension, steering and tires. Safety Administration studies indicate that 80 to 90 per cent of maintenance problems are found in these areas.

- There are several things you can check as, regular inspections of tire pressure (and wear), belts, hoses, battery water level, head and taillights, brake lights, windshield wipers, turn signals and exhaust system. Above all, follow the manufacturer's recommended maintenance schedule.

- Get into the habit of making brief walk-around inspections of your car each day before driving. This involves checking the tires, windows (for cleanliness) and signs of fluid leaks under the car. Start the engine and check gas level, oil pressure and generator gauges, and the brake pedal for loss of pressure. Then, when you move out, sit up straight, but comfortably, to increase alertness.

- In line with maintenance, don't make modifications to your vehicle. Don't jack up the back end, employ oversize tires, or paste unnecessary decals on windows. Auto designers take great pains to build safe cars; any modifications you make upset the delicate balance they have put into them by overloading suspension, changing steering characteristics and cutting down visibility.

- Another cause of accidents is speed, which surely kills. Naval Safety Center figures show that exceeding the lawful and safe speed limits accounted for over 360 auto or motorcycle accidents involving Navy people in 1973. Consider: at 60 mph you are traveling one mile per minute—how long does it take you to size up an emergency situation and react? A miraculous one second? Then you've already gone 88 feet, not counting how long it takes you to get your car stopped safely after braking—which at 60 mph is about 360 feet. Incidentally, to determine your safe stopping distance the American Trucking Association suggests you note your speed then multiply it by the first number of the speed. For example, at 50 mph it is 50 x 5 or 250 feet.

On an interstate highway 55 mph may be perfectly safe, but in city traffic it could, literally, be murder. The important thing is to stay within posted speed limits (they are put there for a reason) and to adjust speed to driving conditions. In congested areas, slow down. On wet streets, slow down. On leaf-covered streets, slow down too; they may look dry, but are probably still wet and slippery.

On freeways don't exceed the speed limit (which is now 55 mph nationally) but don't drive too slow either, that's also a great hazard. It is best to drive at the same speed as other cars around you. Glance at your speedometer from time to time. When driving at high speeds for long periods of time one has a tendency to go gradually faster without being conscious of the change.

- Poor weather contributes to traffic accidents, but not as many as you might think. Studies indicate that less than two per cent of fatal accidents occur in foggy weather; only about nine per cent in rain; and only about two and one-half per cent in snow. A full 86 per cent of death-dealing traffic accidents take place in clear weather. People tend—for the most part—to drive more cautiously in bad weather.

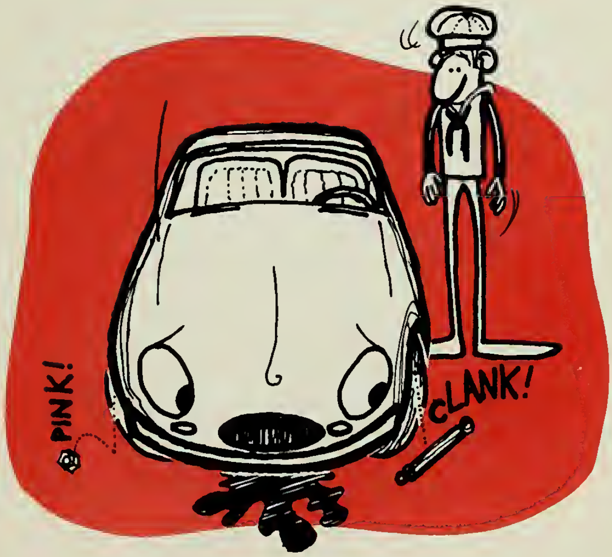
Naval Safety Center statistics for 1973 show that Navy members driving POVs were involved in 1582 accidents on dry roads. Compare this with the 311 Navy POV accidents on slippery roads and the point is made.

- When driving in fog, the greatest hazard is reduced visibiliity. Slow down (again)! Turn on your lights but not your high beams—light will only be reflected and reduce your visibility even more. Keep your windows open in order to listen as well as look out for danger.

If fog is scattered in patches, enter each fog area at reduced speed. You may not be able to see a stopped truck or a pedestrian walking on the roadway. It's better to be moving slowly when a walker suddenly appears out of the fog in front of you than to be barreling along and unable to stop.

- Rain makes all pavement slippery, especially well traveled roads where engine and tire residue has been built up. When driving on rain-slick streets, avoid sudden stops, starts and sharp turns which can throw your car into a skid and out of control. Also slow down when going through large puddles, they can cause you to lose control or can splash water on exposed wiring and other vital engine parts.

- Snow and ice, naturally, make surfaces slick and this requires the same general precautions as used on wet streets. Also called for are some special safe driving



techniques. When starting out in ice or snow go slow, in a high gear, to gain more traction. Spinning wheels only generate heat, melt a small amount of snow which turns to ice and compounds traction problems. Also when starting out, keep your wheels straight if possible so that you don't swerve when you break loose. When you stop, pump your brakes rapidly to gradually slow the wheels. A slowly turning wheel gives control. A brake-locked wheel only slides out of control.

Snow tires, chains, studs (if legal in your area) and added weight in the trunk (a bag of sand) will increase traction and aid safe starts and stops, especially on ice. Full chains give the best results, but don't think they are a solve-all—your front wheels are still vulnerable. If you don't want to use full chains, consider the strap-on type which are handy in a pinch. At corners, curves and hills, snow becomes packed down by traffic and turns to ice very quickly. Be extra cautious.

Another danger with snow is its high glare. On a bright sunny day this may fatigue your eyes or even temporarily blind you. Wear sunglasses. Ice and snow also add to poor visibility by building up on windshield wiper blades and making it impossible for them to do their job. The best thing to do is stop and clean them off by pulling the wiper arm away from the windshield and letting it snap back a few times.

- Night driving is not exactly "bad weather," but perhaps akin to it. *Dusk is the most dangerous time of day* because your eyes have not yet adjusted to the growing darkness and can easily play tricks on you. Objects seem to be farther away than they actually are; the sky is still light but on the road it may be dark; some drivers have headlights on, some do not; street lights are being turned on and there may be patches of glaring light and darkness; and children crossing the road are hard to see. Slow down at dusk and drive extra carefully. Use your low beams (*not* parking lights) because high beams, besides blinding oncoming drivers, add light to the sky's general brightness. High beams also make it difficult to see objects reflecting small amounts of light from the road.

When full darkness does arrive the dangers and methods of driving change again. The main problem at night is seeing others while being visible yourself.

- Experts suggest you allow about 20 minutes for your eyes to adjust to darkness before setting out at night. They also say that oxygen or cool air is a good stimulant to help your eyes adapt to the dark, so open your window a little and leave it open while driving at night, (actually, one should *always* drive with at least one window opened slightly). Make sure your windshield is clean inside and out; light coming through a dirty windshield scatters and vision is hampered. Also clean your headlight glass so they are most effective. Do not wear sunglasses after dark; they reduce glare from oncoming headlights, but that advantage is lost by cutting down your vision.

CHUG!
CHUG!
CHUG!
CHUG!
CHUG!
CHUG!

Reduce your speed after nightfall, first because it's more difficult to see, but your ability to see in darkness also is reduced by increased speed. Experts have found that the capacity to see and distinguish objects at night decreases by 20 feet with every 10 mph increase in speed. In other words, if you're traveling at 20 mph

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A Vital Keynote...

It's easier than ever to forget to lock your car—and there it sits, temptingly filled with packages, just waiting for a thief.

There is no guarantee that your car won't be stolen. Still, a few good habits will minimize the possibility. These include always locking the car, even if it's left for only a few minutes; never leave the key in the ignition, even in your garage; and lock packages in the trunk instead of putting them in full view.

Avoid parking in isolated locations or dimly lit areas; thieves operate primarily after sunset. Be sure the windows are rolled up before the car is locked.

Stolen cars constitute a major hazard on the highways. Many of them are driven by frightened or inexperienced drivers who only add to the carnage as they flee from the law. Add to this the simple fact that many insurance policies don't pay off if the key was left in the ignition, and you may find it worth the effort to acquire good car safety habits.

you can see and identify objects 80 feet farther away than if you were driving at 60 mph. Therefore, "overdriving" your headlights can be risky.

- Another problem of night driving is headlight glare from oncoming cars. An approaching driver with high beams on can blind you for five to seven seconds, long enough to cause a serious accident. Avoid looking directly into oncoming headlights by guiding your car by the white shoulder line or curb. It's not a good idea to signal another driver to lower high headlights by flashing your high beams at him; it may startle him. Don't forget to lower your own high beams well in advance of oncoming cars, the other guy is having the same difficulty as you.

Headlight glare from following vehicles can be a problem as well. If your rearview mirror has a deflection feature, use it. Be careful though, as this causes difficulty in judging distances through the mirror of cars behind you. If your mirror does not have this feature, change its position to point the glare away, and do the same with side mirrors. When you need to use them move your head enough to make use of them.

Vehicle mechanical condition, speed and weather are all contributing factors to traffic safety, but *the greatest cause of accidents is still driver error.* Most people in this country have never taken a driving course and are self-made drivers. Many continue to make the same dangerous mistakes they "learned" in the beginning. This became evident to the National Safety Council and led them to develop the Defensive Driving Course (DDC) which is based on training techniques of the motor transportation industries. The eight-hour course is taught by instructors certified by the Council.

Contracting for the course in 1969, the Navy has used it throughout the Fleet and shore establishment. Funding reductions and personnel shortages caused a reevaluation of the program in 1973 and it is now offered mainly at the initial points of entry to the Navy for all personnel under 26 years of age. Commands within CONUS, other than points of entry, may conduct the DDC if they wish; the Naval Safety Center will give support.

- Defensive driving is watching out for the other guy, driving with total concentration on the job, being alert to what other drivers and pedestrians are doing and being courteous. It is seeing the possibility of an accident in advance so that you can take proper action to avoid it.

The most basic rule of defensive driving is to be alert.

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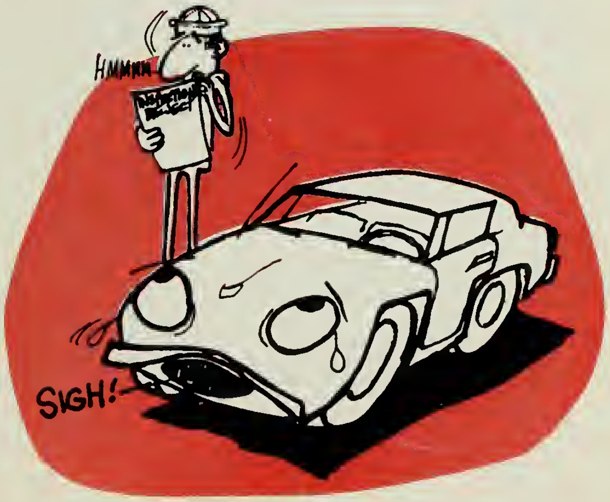

Watch traffic ahead, to the sides and behind you. On the highway, look at least half a mile ahead; in the city, a block ahead. Closely watch the car directly ahead of you, keeping alert for changes in speed and direction. And, of course, don't follow too closely. Watch the sides for vehicles and pedestrians entering the road.

Checking the rear calls for glancing into the rearview mirror at least every five seconds, and also checking blind spots (most cars have them to the rear sides).

- Be extra alert to the rear when changing lanes. Before you move over, check rear and side mirrors, then turn your head quickly to see that the blind spot is clear. Put on your turn signal well in advance of moving over—just because you turn it on doesn't mean you can jump right over into the new lane; give the guy behind you a chance to see what you are about to do.

If watching all this at once seems like an impossible job, it really isn't. Scan the scene constantly, keep your eyes moving with no longer than two seconds on any one spot unless there is a dangerous situation developing. Don't sightsee. If you want to see the scenery, pull off the road. When talking to others in the car, watch the road and don't turn your head to look at them.

- When you want to stop do it gradually. Check your rearview mirror, give the proper turn signal, then gradually slow down. Wait until there is enough space between you and the car ahead so that if you should get hit from the rear you won't be slammed into the car in front. Flash your brake lights so the driver behind you knows what you are doing, then, when your speed is slow enough, pull quickly off the road—all the way off. Once off the road, gradually come to a complete stop. Before you get out of the car make sure no traffic is approaching from the rear and that you have enough room so you won't step into the path of a passing car.

- If, when stopping, your car starts to skid, turn your front wheels slightly into the direction of the skid. Don't hit the brakes, they will only lock your wheels and reduce your control of the car. You might pump them slightly, but let the engine do most of the braking. If you do start to skid in the other direction, turn the steering wheel in that direction. This same technique should be used for skids on ice and snow.

- Passing presents its own problems of defensive driving. On two-lane highways the great danger is head-on collision, and you must be absolutely certain you have enough room to get around the car ahead of you in time to avoid a head-on. Remember, once you get into the opposite lane you and that oncoming car are closing at twice your speed and when you hit, it's like slamming into a concrete wall at your *combined speeds*. When passing on divided highways (interstate) watch for cars coming up from behind, in the inside lane. Check mirrors and take a quick glance at your blind spot. If the way is clear, put on your turn signal, pull into the inside lane and pass. On both two-lane and divided highways wait until you can see the car you have passed in your rearview mirror, then put on your turn signal and move back into the right lane.

Hic!
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When another car passes you, keep well to the right and maintain a steady speed. If you see it's not going to make it around you in time to avoid an oncoming car, slow down and let it in, but check the car behind you and flash your brake lights to signal you intend to slow down. You might even switch on your hazard blinker signals.

- Freeway driving calls for some special skills. Things happen fast at freeway speed and you must be extra alert. When getting on the freeway, use the acceleration lane to get up to traffic speed, look for an opening, put on your turn signal and then enter the main road at the same speed traffic is moving. Don't stop in the acceleration lane; slow down if you must, but don't stop and risk the possibility of a rear-end collision by a driver behind you who is looking at the approaching traffic.

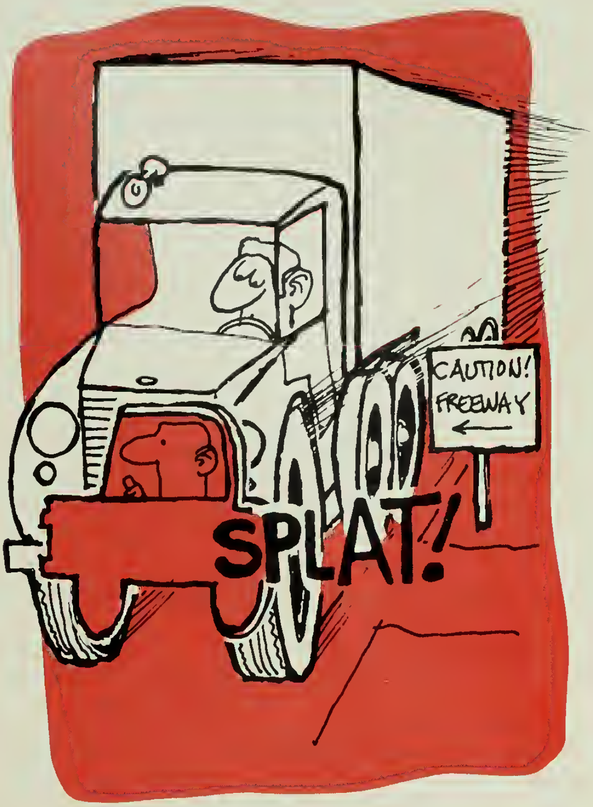
If you approach an interchange with other cars entering the main stream of traffic, move into the middle lane and let them enter if you can, or at least slow down and let them in if you see they're not going to wait for you to pass.

Once on the freeway, don't follow too closely or allow traffic to bunch. A sudden stop by one vehicle in a bunch (actually a "wolf pack") could cause a chain reaction accident. If you see you're getting too close to the car ahead, slow down gradually.

- The Two-Second Rule is a good way to learn to recognize safe following distance. Just watch the vehicle ahead of you pass some definite point in the highway, such as a tar strip. Then, count to yourself "one thousand and one, one thousand and two." That's two seconds. If you pass that same spot before you finish those words, you are following too closely. Of course, people cutting in and out of lanes constantly play havoc with this rule.

When you reach your freeway exit put on your turn signal well in advance, move into the deceleration lane, then gradually slow down. Do not exceed exit ramp speeds; ramps are often sharply curved and if taken too quickly could cause you to lose control of the car. It's also important to remember that once off the freeway it takes some time to adjust to the slower rate. Forty miles per hour feels like a crawl—watch your speedometer until you regain the feel of slower speeds.

Freeway exits are marked well in advance—know where yours is and watch for it. If you do miss your exit, *never* stop and back up to it. It's better to drive on a few miles and take the next one than to get slammed in the rear by a 3000-pound car going 55 mph. Don't use median U-turns either; they're reserved for emergency and maintenance vehicles. You're taking a big chance if you use them because you have to slow down in the center, fast-traffic lane to get on them, and



you will be entering in the fast lane on the other side where oncoming drivers might not be looking for you.

- Another danger of freeway driving is "turnpike trance." After hours of steady, easy driving it's not hard to become sort of hypnotized so that you lose your alertness and reaction reflexes. To avoid this, keep your eyes moving, play your radio, open a window, and if you're supposed to wear glasses because of astigmatism, then put them on. Make frequent stops too, especially if you become tired.
- The greatest highway killer is alcohol. Drinking and driving don't mix! It's been said so many times it hardly seems necessary to repeat—but it is necessary since drunk drivers continue to kill themselves and others year after year. National statistics show that more than 50 per cent of all auto accidents with fatalities involve alcohol. *Last year, 35,000 Americans were killed in alcohol-related traffic accidents*—that averages out to about 670 per week.

How much alcohol is too much? Medically, one drink slows your reactions and affects your judgment, vision and alertness. Legally, in the state of Virginia for example, a blood alcohol content of 0.10 per cent means you're driving while intoxicated. That level isn't hard to reach. A 160-pound man drinking 86-proof whiskey or equivalent spirits within two hours after eating needs only four mixed drinks with one jigger of whiskey each,

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A Car Bought Overseas Must Meet Safety Standards

Buying a car overseas has been a money-saving benefit to Navy members. For the unwary, though, it can lead to more expense and trouble than it's worth. Here are some thoughts to keep in mind when shopping for those new wheels overseas.

First, buying overseas isn't the bargain it used to be. Inflation, the stem of the gold flow, dollar devaluations and increased shipping costs have all taken a bite out of the bargain. But, if you shop around and take a few precautions, you might still save a few bucks. Remember, there's more than the original purchase to be considered.

One of the biggest expenses is getting that new car back to the states.

Foreign-manufactured cars purchased overseas will not be shipped to the states at government expense; you must pay. Government shipping is on a space-available basis and costs about $250 (that rate may double soon). Civilian shipping costs even more.

If, however, you go overseas without having the government ship your car there, you can have a new

or one half bottle of wine (4/5 quart), or one six-pack of beer (12-ounce cans), to be legally intoxicated. Don't take these figures as gospel though; alcohol affects different people in different ways at different times. Just one-half of these quantities can raise your blood-alcohol level to the point where you can be affected by it and legal responsibility begins.

- Another safety factor constantly repeated, but often unheeded, is to use safety belts. Research by universities, auto companies, government agencies and police departments proves that more than 10,000 deaths, 85,000 severe injuries and countless minor injuries could be avoided each year if everyone "buckled up."

Here are some good reasons why:

- Safety belts will keep you from being thrown out of the car in a collision. The probability of death is five times greater if you're thrown from the car, and under any circumstances you're better off belted inside. In convertibles the danger of being thrown is greatest, and, since only one out of five accidents involves rolling over, safety belts still have the advantage.
- Safety belts will keep you from being thrown about inside the car. If you have your shoulder harness on, as you always should, you won't be slammed against the steering wheel, dashboard or windshield. Safety belts also keep little accidents from becoming big accidents by keeping you in the driver's seat and in control of the car.
- Safety belts help reduce fatigue and keep you more alert. They improve posture and cause better breathing, less backache and less muscle tension. They also hold you upright so you can see better and give you a feeling of security and confidence so you can relax more.

Everyone in the car should wear seat belts, including those in the back seat and especially children. Infants under six months old should be strapped into a car-carry bed, firmly secured by lap belts. Children who are able to sit up by themselves should be belted in with special restraints or seats. Children over about five years old can use adult seat belts with a firm cushion under them for added height if necessary.

To be a safe driver then, remember these pointers:

- Keep your vehicle in good mechanical condition.
- Be alert, observe traffic laws and take your time.
- Don't drink and drive.
- Fasten your seat belts.
- Be courteous.
- Always be on the defensive.

Or, as one father told his teenage son during his first driving lesson, "Drive like everyone else on the road is a maniac behind the wheel and you'll stay out of trouble."

—JO1 Tom Jansing, USN

—Art by Mike Tuffli

U. S. car shipped to you and returned stateside when you are transferred home.

An imported foreign-made car must meet all current U. S. safety and emission standards. If it doesn't, it may be admitted to the country only after a bond has been posted providing it will be brought into conformity within 90 days after entry. The necessary modifications could be costly once the car is in the States. Foreign-made cars built for sale in Europe generally do not meet U. S. standards, but they can be ordered from the manufacturer with necessary U. S.-required equipment. The original manufacturer is required to affix a tag to the car certifying that it meets all specifications. If this tag is missing you must obtain a statement from the original manufacturer showing that the car was built to U. S. standards. If the car is brought into conformity after manufacture, a statement must be obtained from the person who made the alterations stating the extent of the work done. With both statements, a declaration must be filed when the car is brought into the States. Your transportation officer can advise you on what current U. S. standards are.

The European Exchange System (EES) does not sell European cars. But, any service member stationed in Europe under the NATO status-of-forces agreement may purchase a European car, motorcycle, trailer or late-model used car, tax-free through the Canadian Forces Base, Europe (CFBE). Dealers under contract to CFBE are often located near major U. S. military bases. CFBE charges a processing fee of $35 for cars and $20 for motorcycles and trailers, but this is more than offset by the tax saving. CFBE dealers also give discounts on some European models.

Buying an American-made car is much easier. U. S. auto manufacturer representatives operate new-car sales offices at almost every major military installation. Some even have demonstrators and new cars on display.

These overseas representatives offer discounts on all new cars as well as on most accessories and optional equipment. However, even with the discount, it is often possible to beat their price by buying from stateside dealers late in the model year. The overseas price remains the same year-round.

Before you sign a contract to buy any car overseas, read it carefully and have your legal assistance officer check it. In Europe, the EES distributes a booklet entitled "New Car Sales Program." Get a copy and read it. It will tell you how to place an order, delivery times, special ordering, stateside delivery, financing and other important facts.

If you plan to use the car overseas, find out how much your insurance will cost before you buy. Because of the extremely high accident rate overseas, insurance is generally more expensive than in the States. Don't buy a car then find out you have overextended yourself financially because of unexpectedly high insurance premiums.

You can still get that car of your dreams overseas for less, but before you buy, take a close look at the pros and cons. You may discover it's not such a bargain after all.

STATE AUTO LAWS FOR THE NAVY TRAVELER

An automobile is unquestionably a great convenience but, for a family on the move, one, two, three or more motor vehicles can also be a pain when their owner tackles state laws governing them.

Each change of duty station usually means a transfer to a new state. If you have only yourself and your car to worry about, life is simpler. If you're married, however, matters can become complicated and Navymen beginning an unaccompanied tour overseas may feel they are hopelessly entangled in red tape.

Nearly every locality has devised a set of rules governing automobiles which vary slightly from adjacent areas. These rules, however, aren't as bewildering as they might seem at a glance for they, at least, follow a pattern of sorts.

On these pages, we have attempted to isolate a central theme in the automobile laws which may be significant when you move from one political jurisdiction to another. Once you have established which is your domicile and which is your duty station (more on that later) you can consult the table at the end of this article for the variations on the theme. We have tackled only the laws of the 50 states and the District of Columbia. We have also avoided regulations pertaining to trucks, trailers, motorcycles and other motor vehicles.

One point of considerable importance is that of registration. Loosely defined for this discussion, auto registration refers to the necessary legal steps taken to establish the fact that a car is yours and is licensed to be driven for a given period of time. This usually is done by presenting a bill of sale or a certificate of title to the proper authorities who thereupon "register" the car in your name.

If you don't pay cash for your car, the lender who makes up the difference between your down payment and the full price of your auto may hold a lien on the car until your loan is paid, whereupon he turns the title over to you. To establish your ownership of the car, you are given a bill of sale.

A word of caution here: A car without a valid bill of sale or title is almost worthless. You can't buy license tags, nor can you sell it. You're stuck with a conveyance you can't drive on a public highway.

Customarily, you apply for your license tags at the same time you register your car and, after a few days' wait (if not immediately), you receive tags and a new registration certificate. This certificate generally must be carried in the car or on your person whenever the car is driven. It must be available to inspection by competent authority upon demand.

All states require that you pay a license and registration fee or tax but this amount fluctuates wildly from state to state. The fact that you registered your car is indicated by the issuance of new license tags and a new registration card. On a given date, which also varies from state to state, the validation of the old tags expires and the new tags become current. These dates are shown on a table which follows. Some states have a grace period between the actual expiration date and the time the new tags must be on your car. The latter date is shown on the table.

So far, the procedure has been comparatively simple; the complications begin when determining where you legally reside while you are in the military service. There's a big legal difference between "residence" and "domicile."

At the risk of oversimplification, you may consider your state of residence as the state in which you are currently living. From now on, we'll refer to it as your "duty state." In the course of your naval career, it is probable that you will have a number of duty states and one of them may be your domicile.

Your domicile is the state which you consider to be your permanent home and to which you intend to return. This may, but need not be, the same as your duty state. The Soldiers' and Sailors' Civil Relief Act ensures that you will have a domicile. You can take action to change your domicile but you can't be deprived of it just because you are on active duty with the armed services. No matter how long you may be physically absent from this domicile, it is still yours until you designate another domicile. Change can be effected by voting, paying taxes, transferring your savings and various other considerations—including registering your automobile in the new state.

It is legally impossible not to have a domicile and it is equally impossible to have more than one domicile. From now on, we are going to call your domicile your "home state."

Now that we've disposed of the preliminaries, let's get back to the subject of registration. According to JAG, "A serviceman who has not registered his car and obtained license plates under the laws of his home state may be required by a duty state to register and license the car under its laws." This opinion was based upon a Supreme Court clarification of portions of the Soldiers' and Sailors' Civil Relief Act.

This means that, when you are ordered to duty outside your home state, you may, if you wish, consider yourself a resident of the duty state for purposes of motor vehicle registration and driver's license. However, if you have current auto registration and driver's license from your home state, you may not be compelled to acquire them in your duty state.

The tabulated information following this article, beginning on page 32, has been excerpted from the 42nd edition of the Digest of Motor Laws, published by the American Automobile Association, the copyright owners. The Association has authorized publication of this material in ALL HANDS.

Here, you may find it convenient to note that many states have special laws which accommodate servicemen who are domiciled in that state, but are temporarily absent on active duty. Such laws may, for example, provide extensions of time or reductions of fees when it is difficult for you, because of your absence, to comply with your home state's motor laws within the time prescribed for other residents. Again, however, you usually have the choice of registering your car in your home state or in your duty state. Generally, you may not register it in some third state.

Also:

- Your car registration must be renewed annually. Deadlines vary from state to state.
- If you register your car in your home state, all the necessary fees, licenses and taxes must be paid to that state. You can't pick and choose which laws you will follow in your home state and which you will observe in your duty state.
- Your operator's permit (driver's license) must be kept up to date.
- If you use license plates and driver's license from your home state, your duty state may require you to display a special tag or sticker which usually is free or available for a small handling charge.
- If you register your car in your duty state, generally you must comply with all local registration laws, obtain a driver's license from that state, and meet inspection, insurance and other requirements.

Although the Soldiers' and Sailors' Civil Relief Act offers you some protection in regard to motor vehicle laws, it does nothing for your dependents. Your wife, for example, may be required to obtain a driver's license in your duty state, even though the family car bears the registration of your home state.

Of course, it is general practice among the states to permit nonresident drivers to use the highways of a state for a certain period without requiring them to register their vehicles in the state, but there's a time limit which also varies.

In short, if the car is registered in your wife's name (or your offspring's name) and if she lives with you in your duty state, she usually must obtain a driver's license and register the car locally within a limited period. The same may apply if the car is jointly owned.

State laws also generally require motorists involved in an accident to file a report. Most states have established a minimum damage cutoff point at which the accident need not be reported to the police but, as this amount is usually quite small, for all practical purposes it means reporting any accident.

Where death or injury is involved, it is, of course, absolutely necessary to notify the local police, sheriff or highway patrol by the quickest means available.

Under no circumstances should you leave the scene of a major accident without having notified the proper authorities.

Further, when death, injury or property damage is involved, the financial responsibility laws of most states require that separate reports be filed within a specified period so that security may be posted for claims arising out of the accident.

You are strongly advised to learn your legal obligations in connection with accident reporting. It usually is not good to rely on the other driver to make the report or to call the police to investigate at the scene of the accident.

You also should understand the financial responsibility laws which apply to liability for damage due to negligent driving. Basically, there are three types of laws now in force throughout the United States. These do not include the "no fault" laws such as Michigan, Maryland and certain other states now have and which may become more widespread in the near future.

- Security-type laws require that, following the report of an accident, each driver or owner of the vehicles involved must prove his ability to pay any damages which may be charged to him in litigation or negotiations which follow the accident.
- Future-proof laws usually require that a similar showing of financial responsibility be made by persons who have been convicted of certain serious traffic violations or who have failed to pay a judgment against them for damages arising out of an accident.
- Compulsory-insurance laws require that you annually file proof of financial responsibility before and as a condition of vehicle registration.

In all three types of laws, the penalty for failure to comply usually is suspension of the driving privilege and vehicle registration of the persons involved.

Minimum requirements of financial responsibility usually are expressed in terms of the amounts applicable to death or injury of one person, death or injury of more than one person and property damage, in that order. For example, the amounts might be $5000/$10,000/$5000, respectively. This responsibility usually is taken care of by an insurance policy.

One other aspect of financial responsibility laws might well be considered here. "Arrest bond certificates" or similar certificates are available through various automobile associations and are honored in many states. Briefly, this is how the plan works:

You post your membership card and "arrest bond certificate" with the court. You then may leave the jurisdiction of the court and, if you choose to appear for trial, your membership card and certificate are returned to you or your automobile club. However, if you elect to forfeit your bond and don't appear for trial, the court notifies the automobile club. The club then arranges to pay the forfeit and, in return, receives your membership card from the court. You then reimburse the automobile club for the amount spent in your behalf and your membership card is returned to you.

State tax laws usually are based on the taxpayer's residence or "presence" in a state. This is the primary reason Section 514 of the Soldiers' and Sailors' Civil Relief Act was written, to protect you from being taxed by two or more jurisdictions in one year. Under the Relief Act, sole rights to tax your military pay and your property remain with your home state when you are absent from that state to comply with military orders.

With regard to auto registration in a duty state, you are protected from some local taxes but, generally, you must pay any non-revenue-producing tax which qualifies as a license, fee or excise.

But remember, if you own a car jointly with your wife, it usually must be registered in your duty state (assuming that's where you live). And, though it's true that the domicile (home state) of your wife generally is the same as your own, she is considered a separate entity for tax purposes. Therefore, she may be liable for taxes when you are not. Her share (or perhaps all) of jointly owned property, therefore, may be taxed locally.

In other words, personal property taxes, sales taxes and some other kinds of tax may be applicable to your dependents, but not to you. This means that if your wife has an income or owns property in her own right (such as an automobile) she may be liable for taxation in your duty state.

Here's a tip regarding taxation and tax authorities—it is quite possible that you may be questioned by the authorities of your duty state concerning your tax liability. Don't consider that your integrity is being attacked if you are asked to prove you are not domiciled in a state. Cooperate and, if you feel you are being subjected to taxes you shouldn't be required to pay, contact your local Judge Advocate or Legal Assistance Officer.

Now for the answers to some most-asked questions on state auto laws. Here's a table based on the 1975 "Digest of Motors Laws" (Forty-Second Edition) of the American Automobile Association. Before you check the table, please note the following:

- Registration—Expiration dates shown include periods of grace (if any) observed in some states.
- Driver's Licenses—Unless otherwise indicated, the renewal fee is the same as the original license fee.
- Accident Reports—All states require that the local police, sheriff or highway patrol be notified immediately of any accident which involves death or personal injury. You must also report an accident if property damage exceeds the amount shown in a given state.
- Liability—Minimum requirements of financial responsibility (which generally means how much auto insurance coverage you must have) are shown in abbreviated amounts applicable to (1) death or injury to one person, (2) death or injury to more than one person and (3) property damage. For example, 10/20/5 means (1) $10,000, (2) $20,000 and (3) $5000.

—Robert Neil

DIGEST of AUTO
REGS BY STATE

DIGEST OF STATE AUTO REGS*

State	Registration Expires (Includes Grace Period)	Registration Fee (Auto)	Driver's License Valid For	Driver's License Fee	Auto Inspection	Report Accident If Damage	Minimum Liability
ALABAMA	15 Nov	$13 plate; $1.00 issue	2 years	$4.25; ($4.50 in Jefferson Co.)	No state; city may	$50	10/20/5
ALASKA	31 May	$30; $15 after 1 Dec	3 years	$5	State police may at roadside.	$100	15/30/5
ARIZONA	Staggered	$8.00	3 years	$5	No	$100	15/30/10
ARKANSAS	Staggered	$12 to $26 by weight	2 years	$6	Annual	$50	10/20/5
CALIFORNIA	31 Dec	$11	4 years	$3.25	Spot check; See note.	$200	15/30/5
COLORADO	28 Feb	By weight; $7.50 min	3 years	$2.25	Annual $5.50	$100	15/30/5
CONNECTICUT	Staggered	$15; $7.50 after 6 mos.	2 years	$0.35 per month w/max. of $2 for 6-month period. $5 for exam. $8 for renewal	Annual Voluntary; also spot checks	$400	20/40/5
DELAWARE	Staggered	$20, one year; $11, six months	4 years	$10	Annual No fee	$250	10/20/5
DISTRICT OF COLUMBIA	31 Mar	$30.50—$50.50 by weight. One-half reduction after 1 Oct	4 years	$12	Annual, $3	"Material damages"	10/20/5
FLORIDA	20 Aug	$13.50 to $36.00; by weight	2 years	$6.00	Annual, $3	$100	10/20/5
GEORGIA	1 Apr	$3 to $15; by weight and age	4 years	$4.50 to $8.50	Annual, $3	$100	10/20/5
HAWAII	31 Mar	¾ cent per lb. net weight; $2 plate	2-4 years depending on age	$2, 2 yrs $4, 4 yrs	Annual for vehicles under 10 years old. 6 mos. for others.	$100	10/20/5
IDAHO	Staggered	$7.20 to $18.00; by age	3 years	$7	Annual, $2	$100	10/20/5
ILLINOIS	31 Dec	$18 to $30; by horsepower	3 years	$8	Trucks only	$100	10/20/5

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Notes:	State
Nonresident must register vehicle in Ala. 30 days from date of entry. No special licensing arrangements for resident Navymen.	ALABAMA
Nonresident must register vehicle if stay exceeds 90 days.	ALASKA
Nonresident must register vehicle if children are in public school. Resident Navymen may use driver's license 90 days after discharge.	ARIZONA
Nonresident must register vehicle within 10 days after he becomes employed.	ARKANSAS
Nonresident may drive w/valid home state registration until it expires. Grace periods not honored. Navyman w/valid driver's license on entry into service may use license until 30 days after honorable discharge while absent from state unless license suspended or revoked. No vehicle inspection required of servicemen.	CALIFORNIA
Nonresident must register vehicle within 30 days after becoming Colorado resident or becoming gainfully employed in state. Nonresident servicemen on duty may retain the current vehicle registration from any other state. Nonresident on active duty and spouse may drive in Colorado with a valid home state driver's license. Colorado servicemen on duty outside state when driver's license expires granted an extension for 3 years or until 90 days after their return to state, whichever is first.	COLORADO
Servicemen stationed in state may operate vehicle with out-of-state plates. Servicemen residents of Connecticut at time of induction will be issued free driver's licenses while on active service and for one licensing period after discharge. Nonresident servicemen in state may use out of state valid driver's license.	CONNECTICUT
Nonresident must register vehicle if employment is accepted or places his children in Delaware schools, or if residence is established. Must secure registration within 90 days after establishing residence. Driver's license must be acquired within 90 days of establishing residence in state. Serviceman having Delaware driver's license at time of entry into service may drive on his expired license until 90 days after discharge provided license hasn't been revoked or suspended and serviceman is not incapacitated.	DELAWARE
Nonresident must register vehicle at expiration of time allowed by reciprocity agreement with home state. If a serviceman, on a duty station outside the District was a resident of the District when his driver's license was issued, then that license is valid for an additional 6 years after date of expiration if he remains in service outside the district provided he applies each 4-year renewal period for such extension.	DISTRICT OF COLUMBIA
Nonresident must obtain registration within 10 days upon obtaining employment or placing children in school. Vehicles owned by servicemen stationed in state may be operated on home state registration. Florida servicemen may renew driver's license, without exam or delinquent fee, upon presentation within 90 days after discharge.	FLORIDA
Nonresident may stay in Georgia on reciprocal basis for 30 days. Serviceman stationed in state may maintain out-of-state registration.	GEORGIA
Nonresident must register vehicle 10 days after arrival. Nonresident can apply for permit free of charge to operate his motor vehicle up to expiration date of his state registration. Serviceman on active duty in Hawaii may maintain home state vehicle registration. Resident serviceman's driver's license, issued before 1968, is valid until 30 days after discharge unless earlier revoked or suspended.	HAWAII
Serviceman stationed in state may maintain out-of-state registration, driver's license. Servicemen claiming Idaho residence will have their licenses automatically renewed for 3 years or until 60 days after honorable discharge.	IDAHO
Nonresident must register vehicle at time granted by reciprocity agreement w/home state. Residents serving in armed forces outside CONUS need not obtain driver's license within 45 days after return to CONUS.	ILLINOIS

DIGEST OF STATE AUTO REGS

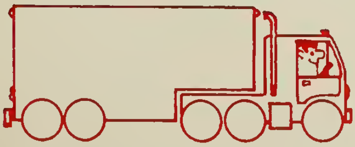
State	Registration Expires (includes Grace Period)	Registration Fee (Auto)	Driver's License Valid For	Driver's License Fee	Auto Inspection	Report Accident If Damage	Minimum Liability
INDIANA	Staggered	$12.25; half after 1 Aug	4 years	$5	Annual	$100	15/30/10
IOWA	31 Jan	$5 minimum	4 years in most cases	$5 for 2 years; $10 for 4 years	At first Iowa registration & on transfer	$100	10/20/5
KANSAS	Staggered	$10 to $20; by weight. Fees reduced semi-annually	4 years	$6	Voluntary	$200	Has no-fault insurance law.
KENTUCKY	1 Mar	$11.50; plus $1 clerk's fee	2 years	$3	Annual	$200	10/20/5
LOUISIANA	Every 2 years	$6; $3 after 1 Dec	2 years	$3.50 to $11	Check local requirement.	$100	5/10/1
MAINE	28 Feb	$15; $7.50 after 1 Nov	2 years	$5	Every 6 mos., $2	$200	20/40/10
MARYLAND	31 Mar	$20 or $30; by weight	2 years	$10 orig. $2 renewal	On resale or transfer	$100	20/40/5
MASSACHUSETTS	Staggered	$6	4 years	$10 orig. $3 exam; $10 renewal	Twice each year, $2	$200	5/10/5
MICHIGAN	31 Mar	55¢ per 100 lbs. vehicle weight; $12 minimum. One-half after 1 Oct.	3 years	$6 orig.; $4.50 renewal	Spot check	$200	No-fault insurance law.
MINNESOTA	31 Dec	By weight and age.	4 years	$5.50	Cities may; also spot checks	$100	10/20/5
MISSISSIPPI	31 Oct	$10 to $20; by weight	2 years	$5	Annual, $2.50	$100	10/20/5
MISSOURI	Staggered	$5.50 to $38; by horsepower	3 years	$3	Annual, $3.50	$100	10/20/2
MONTANA	15 Feb	$5.50 or $10.50; by weight.	4 years	$8	Required	$250	10/20/5

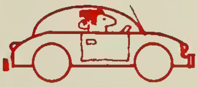
Notes:	State
Nonresidents must register upon establishing residence or after residing in state 60 days. Servicemen on active duty in Indiana may maintain vehicle registration in another state. Indiana servicemen on duty out of state may receive Indiana vehicle registration upon request. Resident servicemen given special extension of period of validity of driver's license for as long as 4 years after entry into service or until 30 days after discharge.	INDIANA
Nonresidents must register upon becoming permanently employed. Otherwise, period of stay is reciprocal. Nonresident servicemen on active duty in Iowa may maintain vehicle registration in another state. Expiration date of a serviceman's driver's license held on entry into service extended without fee for 6 months following honorable discharge provided he is not incapacitated.	IOWA
Nonresidents may use valid home state registration on reciprocal basis. Servicemen on active duty in Kansas may maintain vehicle registration in home state. Kansas servicemen on duty out of state may apply for registration at any time without penalty fee. Servicemen on active duty in Kansas may use home state driver's license provided home state registration is maintained.	KANSAS
Nonresidents must register in Kentucky upon expiration of time granted by reciprocity agreement. Same with driver's license. Kentucky military license good for 6 years or till discharge. Issued on assignment. Fee $3.	KENTUCKY
Vehicle must be registered if employment is obtained. Nonresident's driver's license honored on reciprocal basis. Valid home state license may be used by visitor for 90 days. La. serviceman's license remains valid during his stay in service and 60 days after discharge.	LOUISIANA
Nonresident must register vehicle at expiration of time granted by reciprocity agreement with home state. Nonresident driver's license honored on reciprocal basis. Driver's license of resident servicemen honored for 30 days after honorable discharge. Resident servicemen on active duty may be licensed without payment of any fees upon request.	MAINE
Nonresident's license honored for 120 days on reciprocal basis. License must be obtained upon employment or establishment of residence; operator's license must be secured within 30 days. Servicemen with valid Maryland license at time of entry into service may use such license while in service and for 30 days after discharge or reassignment within state. Nonresident servicemen and their dependents may retain home state driver's license if they maintain home state registration.	MARYLAND
Nonresident must register at expiration of time granted by reciprocity agreement with home state. Public liability insurance required after 30 days with certificate or policy kept in car. Servicemen on active duty in Mass. may retain vehicle registration in home state. Servicemen whose driver's license expired while in military service may operate on this license until 60 days after honorable discharge. Nonresident servicemen may use driver's license of state of legal residence if home state extends expiration date.	MASSACHUSETTS
Nonresident visitor must register vehicle after 90 days on reciprocal basis. Serviceman on active duty in Michigan may maintain out-of-state registration. Resident serviceman's license valid until 30 days after first military leave or discharge following expiration. Nonresident servicemen may use home state driver's license.	MICHIGAN
Nonresident must register on reciprocal basis. Servicemen on active duty in state may maintain out-of-state registration. Nonresident may operate vehicle in Minnesota on home state driver's license. Operator's permit must be purchased within 60 days after residence is established. Resident serviceman's license valid until 90 days after discharge. Nonresident servicemen may use home state driver's license.	MINNESOTA
Nonresident must register vehicle within 30 days. Nonresident (except servicemen) must obtain driver's license after 60 days. Servicemen may renew driver's license upon return from service with payment of regular fee.	MISSISSIPPI
Servicemen on active duty in state may maintain out-of-state vehicle registration. Nonresident driver's license honored on reciprocal basis. Missouri servicemen may renew driver's license by mail if on duty outside state. May also apply for new license without examination within 60 days of discharge.	MISSOURI
Nonresident must register vehicle if employed in state or children are in school. Servicemen having valid Montana license upon entry into service may use such license until 30 days following honorable discharge. Servicemen operating government vehicle on official business don't need a Montana driver's license.	MONTANA

DIGEST OF STATE AUTO REGS

State	*Registration Expires (Includes Grace Period)*	*Registration Fee (Auto)*	*Driver's License Valid For*	*Driver's License Fee*	*Auto Inspection*	*Report Accident If Damage*	*Minimum Liability*
NEBRASKA	28 Feb	$15; $7.50 after 1 Jul	4 years	$1.50 per year	Annual	$250	15/30/10
NEVADA	Staggered	$7.50	4 years	$5	No.	Report all accidents.	15/30/5
NEW HAMPSHIRE	31 Mar	By weight; $15 minimum	4 years	$12	Twice each year	$300	20/40/5
NEW JERSEY	Staggered	$12 to $30; by weight	1 year to 3 years	1 year, $4; 3 years, $11.	Annual	$200	15/30/5
NEW MEXICO	2 Mar	By weight and age; $8 to $36	2 years	$3.25, plus 50¢ admin. fee	Twice each year, $1	$100	10/20/5
NEW YORK	Staggered	By weight; $12 minimum	4 years	$5	Annual, $3	$200	10/20/5
NORTH CAROLINA	15 Feb	$14; quarterly reductions.	4 years	$3.25	Within 10 days of registration	$200	15/30/5
NORTH DAKOTA	31 Mar	By weight and age; $11 minimum.	2 years	$3	No	$200	10/20/5
OHIO	By first letter of last name: A-K, 30 Apr; L-Z, 31 May.	$10.50; Half reductions granted	4 years	$5	Spot check	$150	12.5/25/7.5
OKLAHOMA	31 Jan	By price and age; $7.15 minimum	2 years	Original, $8; renewal, $6	Annual, $2	$100	5/10/5
OREGON	Staggered	$20	2 years	$4	Spot check	$200	10/20/5
PENNSYLVANIA	31 Mar	$14; $16 for station wagon. Periodic reduction.	2 years	$4	Twice each year	$200	10/20/5
RHODE ISLAND	31 Mar	$10 to $33; by weight; reduced quarterly	2 years	$8; $5 for exam	Annual, $1; also spot checks	Report all accidents	10/20/5
SOUTH CAROLINA	30 Nov	By weight $4.00 minimum	4 years	$2	Annual	$100	10/20/5

Notes:	State
Nonresident must register vehicle in state at expiration of time granted by reciprocity agreement with home state. Nonresident driver's license honored for 30 days' continuous residence. Drivers' licenses of servicemen and spouses good until 60 days after discharge.	NEBRASKA
Nonresident must register and have vehicle inspected within 45 days after establishing residence. Servicemen on active duty may maintain vehicle registration in home state. Nonresident servicemen may use out-of-state driver's license if vehicle is registered in another state.	NEVADA
Nonresident must register at end of reciprocity agreement with home state. Also if nonresident finds employment or enters children in school. Nonresident driver's licenses honored on reciprocal basis.	NEW HAMPSHIRE
Registration and driver's license must be obtained within 60 days after residence is established. Servicemen with valid New Jersey license at time of entry into service may drive on it until 90 days after discharge. Evidence of discharge must be in driver's possession.	NEW JERSEY
Nonresident plates good for 90 days. Vehicle must be registered 30 days after residence established. Nonresidents permitted to use home state operator's license.	NEW MEXICO
Vehicle must be registered within 30 days after residence is established. Nonresident drivers' licenses honored on reciprocal basis. Those in service after 6/25/50 may continue to use license for 6 months after expiration of New York State Defense Emergency Act, or the holders' separation from service, whichever comes first.	NEW YORK
Nonresidents must register vehicle at end of period granted by reciprocity agreement. Servicemen on active duty in state may maintain home state registration. Nonresident operator's license honored. Servicemen stationed outside state may renew N.C. driver's license by mail within 1 year from expiration. Application must be endorsed by CO or other authorized person and have doctor's certificate as to physical condition.	NORTH CAROLINA
Nonresidents must register vehicle when residence is established or employment is obtained. Driver's licenses honored 60 days after residence is established. Nonresident servicemen properly and currently licensed in home state not required to obtain operator's license in North Dakota. Resident North Dakota service men, driver license valid for 30 days after discharge.	NORTH DAKOTA
Nonresident registration on a reciprocal basis. Servicemen on active duty in state may maintain out-of-state vehicle registration. Nonresident serviceman and family may use home state driver's license. Resident servicemen with valid license when entering service need not renew license until six months after discharge.	OHIO
Vehicles from out-of-state to be domiciled in Oklahoma must be registered immediately. Servicemen on active duty in Oklahoma may maintain home state vehicle registration. Nonresident servicemen on active duty may register any vehicle (except commercial) for annual fee of $13.50. Nonresident serviceman may use home state driver's license. Vehicle may be registered in home state or in Oklahoma.	OKLAHOMA
Nonresident need not register until current registration expires. Serviceman on active duty in Oregon may maintain out-of-state registration. Nonresident's driver's license honored. No special licensing arrangements for resident servicemen.	OREGON
Nonresidents must register vehicle at expiration of time granted by reciprocity agreement with home state. Servicemen on active duty in Pennsylvania may maintain out-of-state vehicle registration. Nonresident servicemen may use home state driver's license regardless of state in which vehicle is registered. Servicemen with valid Pennsylvania license on induction may use license without renewal while on active service. Application for renewal must be made within one year of discharge.	PENNSYLVANIA
Nonresident registration honored on reciprocal basis unless vehicle is used for business purposes. Servicemen in Rhode Island may maintain out-of-state registration. Nonresident's driver's license honored on reciprocal basis. Resident serviceman may secure special operator's license issued in exchange for valid R. I. license at no cost. Special license good for term of service and 30 days thereafter. Nonresident serviceman may use home state driver's license if home state vehicle registration is maintained.	RHODE ISLAND
Servicemen on active duty in S. C. may maintain out-of-state vehicle registration. Nonresident permitted to hold home state operator's license indefinitely as long as he maintains a permanent residence address in state or county in which he holds a valid and current operator's license. Servicemen permitted 90 days to renew, without examination, a S. C. driver's license that expired while in service. Out-of-state serviceman holding a valid driver's license issued by resident state permitted to drive in South Carolina.	SOUTH CAROLINA





DIGEST OF STATE AUTO REGS

State	*Registration Expires (Includes Grace Period)*	*Registration Fee (Auto)*	*Driver's License Valid For*	*Driver's License Fee*	*Auto Inspection*	*Report Accident If Damage*	*Minimum Liability*
SOUTH DAKOTA	31 Mar	$13 to $65; by weight and age. Periodic reductions.	4 years	$5	Annual	$250	15/30/10
TENNESSEE	15 Apr	$17.75 Court clerk fee 75¢	2 years	$4	Certain cities	$200	10/20/5
TEXAS	1 Apr	By weight; $12.30 minimum prorated quarterly.	4 years	$7	Annual, $2; also after accident	$25	10/20/5
UTAH	28 Feb	$5 plus $1.25 driver education fund	4 years	$5	Annual or semiannual $3.25 max.	$100	15/30/5
VERMONT	28 Feb	$32; periodic reductions	2 years	$6	Twice each year	$100	10/20/5
VIRGINIA	Staggered	$15 or $20 by weight	4 years	$9	Every six months, $3	$250	20/40/5
WASHINGTON	31 Dec	$9.50 plus 2 per cent excise tax annually	2 years	$5.50 license; $2 examination	Spot check	$100	15/30/5
WEST VIRGINIA	Staggered	$20 to $30 by weight	4 years	$5	Annual, $3.50	$100	10/20/5
WISCONSIN	Staggered	$18.15	2 years	$6.50; $2 driver test; $4 renewal	Spot check	$200	15/30/5
WYOMING	1 Mar	$7.50; periodic reduction	3 years	$2.50	Annual, $2	$250	10/20/5

Notes:	State
Nonresident must register vehicle within 60 days on reciprocal basis. Servicemen on active duty in South Dakota may maintain home state vehicle registration. Contact Dept. of motor vehicles for details and requirements concerning resident serviceman's driver's license. Nonresident serviceman may use home state driver's license if home state registration is retained.	SOUTH DAKOTA
Nonresident employed in Tennessee must register after 30 days. Resident servicemen with valid Tennessee licenses on entry into service may use license until 60 days after honorable discharge. Licensee must have discharge or separation papers in immediate possession. Nonresident servicemen and dependents may use home state drivers' licenses if home state vehicle registrations are retained.	TENNESSEE
No special licensing arrangement for resident servicemen. Servicemen on active duty in Texas may maintain home state vehicle registration. Nonresident's operator's license honored for 30 days after residence is established. Nonresident servicemen and members of immediate family may use home state driver's license. Validity of Texas servicemen's licenses extended for 90 days after discharge or return to Texas.	TEXAS
Serviceman on active duty in Utah may maintain home state vehicle registration. Out-of-state vehicles require state safety inspection. Servicemen having Utah license at time of entry into service may use such license until 90 days after discharge. Nonresident servicemen may use home state driver's license.	UTAH
Nonresident must register vehicle at expiration of time provided by reciprocity agreement with home state, but not to exceed 6 months. If employment is accepted, registration is required after six months. Servicemen on active duty in Vermont may maintain out-of-state vehicle registration. Nonresident operator's license honored on reciprocal basis but not to exceed six months. Serviceman who is resident of Vermont with valid license when entering service may continue to use license until 30 days after discharge. However, the license must be renewed four years from date of expiration. Nonresident serviceman may use his home state driver's license.	VERMONT
Nonresident temporarily domiciled and engaged in gainful occupation for 60 days or more is required to secure license plates. Serviceman on active duty in state may retain vehicle registration in home state. Persons temporarily employed and temporarily residing in Virginia may lawfully operate motor vehicles in Virginia on home state driver's license for 60 days. Operator's licenses of Virginia servicemen on active duty outside state valid until six months after discharge. The extension shall not exceed four years from date of expiration of license. Nonresident serviceman and spouse may use home state drivers' licenses if home state vehicle registration is maintained.	VIRGINIA
Nonresident must register vehicle after expiration of time granted by reciprocity agreement, 60 days. Nonresident servicemen on active duty in Washington may maintain home state registration or they may obtain a Washington license without payment of excise tax. All vehicles from non-title states must be inspected by the state patrol before licensing in Washington. Nonresidents may use out-of-state drivers' licenses. Nonresident servicemen may use home state license with either home state registration or Washington vehicle registration. Resident serviceman may use license until 90 days after honorable separation from service.	WASHINGTON
Nonresident must register in West Virginia if stay exceeds 30 days. Serviceman on active duty in state may maintain out-of-state vehicle registration if registered in state of residence. Will not accept military license. Nonresident is permitted to use home state driver's license for 30 days. Serviceman with valid West Virginia license upon entry into service may use such license until six months after honorable discharge. Nonresident servicemen may use home state operators' licenses.	WEST VIRGINIA
Nonresident must register vehicle in state at expiration of time granted by reciprocity agreement with home state. Serviceman may get refund for unexpired registration year if vehicle is taken out of operation upon entry into active service. Application for refund must be made before entry into service. Serviceman on active duty in Wisconsin may maintain out-of-state vehicle registration. Nonresident operator's license honored on reciprocal basis. Servicemans with valid Wisconsin license on entry into service, whose driver's license expires while in service, may apply for renewal license for $4 fee. Nonresident serviceman may use home state driver's license.	WISCONSIN
Nonresident must register vehicle in Wyoming 30 days from date of entry. Serviceman on active duty in Wyoming may maintain out-of-state vehicle registration. Nonresident may use home state operator's license. Resident servicemen temporarily out of state may obtain special license valid without photo. Expiration dates of current driver licenses of resident Navy personnel and dependents residing with the Navy person may be extended for three years. Nonresident servicemen may use home state driver's license. Special license available for residents temporarily out-of-state upon application before expiration of regular license.	WYOMING

from the desk of the

Master Chief Petty Officer of the Navy

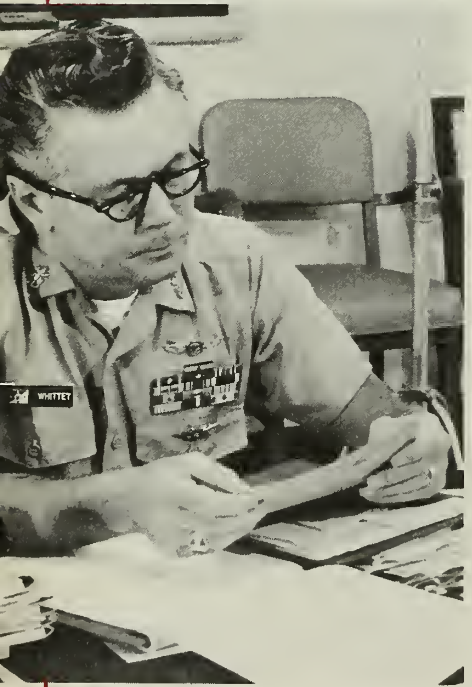
Our Health Care Crisis

As the old saying goes, I have some bad news, and I have some good news.

The bad news is that the Navy Medical Department is faced with an acute shortage of general medical officers which means that the Navy will no longer be able to provide *all* of the medical care desired by *all* of the Navy family *all* of the time.

The good news is that the Bureau of Medicine and Surgery (BuMed) is taking steps to maintain the Navy's capability of providing optimum health services without lessening the caliber of the medical care.

MCPON John D. Whittet, USN



Let's look at the facts. In 1973, the Navy had 1827 general physicians. By 1975, we will have 810. That adds up to a loss of more than 1000 general physicians or approximately 55 per cent of the Navy's total numbers.

Considered in another light, we are currently losing Navy physicians at the rate of more than one a day. That means that one week from today when you come down with one of those miserable winter colds, seven fewer Navy physicians will be available at Navy dispensaries to diagnose your case.

By 1975, if the number of annual outpatient visits remains the same, one general practitioner will have to see approximately 37 outpatients each day. You see, the general practitioner is the first doctor consulted when a medical problem arises. He diagnoses your medical complaint and refers the more serious cases to specialists.

I should note that the Navy is *not* faced with a shortage of specialists. However, the specialist still cannot replace the generalist. In some cases the specialist's training has taken him away from general practice for as long as eight years. The medical profession does not allow many specialists to practice outside their certified specialty, at the risk of losing their professional certification.

The number of new practitioners entering the Navy has also dropped drastically over the past two years, particularly since we lost the advantages of the doctor draft. As of July 1973, physicians were no longer required to serve in the armed forces. The military has been forced to compete directly with the civilian community for the small number of general practitioners available. And, when we first entered this competition, we were handicapped by the fact that we could not offer salaries competitive with the civilian community.

It is clear, therefore, that there are simply not enough general practitioners in the Navy to provide all of the care that is needed. Yet, by public law, we are required to provide care for all active duty personnel. That is the primary mission of the Navy Medical Department.

Also, by law, the Navy MAY provide care for the dependents and survivors of active duty personnel and for retired personnel and their dependents. However, this must be accomplished within the limits of our facilities and without endangering our primary mission of caring for active duty personnel.

When it became apparent that the Navy Medical Department did not have the staff to provide a full range of services to everyone, we were reluctantly forced to limit or eliminate outpatient care for non-active duty personnel in many locations. However, we in no way denied needed medical care to our dependents, survivors, retirees and their families at our naval hospitals. This change in policy made it even more apparent that programs had to be developed to eradicate this doctor shortage crisis.

The Navy is now making an all-out effort to attract young physicians to Navy medical careers. With the recent passage of the pay bonus bill, we now offer salaries more competitive with those available in the civilian community. We are also helping to establish a medical school to train physicians for military medical careers. Some years from now, this university should provide the Navy

with a small, but steady, input of doctors.

Additionally, we are attracting a high caliber of health care professionals to the Nurse Corps, Medical Service Corps, and Hospital Corps. Many of these men and women are assuming positions of increasing authority and responsibility, thereby freeing Navy doctors for direct patient care.

By the fall of this year, some of you may meet the newest member of the Navy health care team: the physician's assistant. The Navy expects to have 31 of these thoroughly trained hospital corpsmen on duty in Navy medical facilities. They will help to take up the slack created by the shortage of physicians in our dispensaries and outpatient clinics.

While these new programs may help to ease the situation, they will not solve the problem. Even with these programs, there will still be times when Navy families will have to seek medical care in the civilian community.

Fortunately, financial assistance is available when civilian medical care becomes a necessity. In 1967, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) became effective. CHAMPUS provides extensive outpatient care in civilian facilities for dependents of active duty personnel, retirees, and survivors on a cost-sharing basis. (Note: A report on medical care under CHAMPUS is contained in the reprint of ALL HANDS' special issue entitled "Rights and Benefits of Navy Men, Women and Their Families," NavPers-15885C, which is still available from the Naval Publications and Forms Center, Philadelphia, as Cog I stock.)

After the age of 65, many people become eligible for Medicare. Care may also be obtained in a VA hospital. Health benefits counselors are assigned to each Navy medical facility to provide information on the medical resources available in that area and to help make arrangements for necessary medical care.

The Navy Medical Department intends to utilize military medical facilities to their fullest capacity. Nevertheless, I recommend that all Navy families prepare themselves for limited medical care. Some families will be fortunate enough to receive total care. Others may have to use CHAMPUS or Medicare programs. Still others may have to acquire supplemental health care insurance to cover the cost of health care not covered by CHAMPUS.

The Navy will continue to seek new solutions for these medical care problems, to attract more physicians to naval careers, to streamline our health care delivery system, and to make optimum use of every resource we have.

In the meantime, we who depend so heavily on the high-caliber medical care we receive in the Navy must do our best to be patient with and understanding of the health care crisis.

Navy medical personnel do care *about* you, but more importantly, they want to care *for* you.

• 10,000 NAVY ENLISTED RATINGS TO BE PROMOTED OVER THREE-MONTH PERIOD

More than 10,000 Navy men and women from seaman to chief petty officer are scheduled to be advanced over a three-month period. Advancement notices went out in December for 3700 people previously selected for promotion. Another 3013 will be advanced this month, and 3333 in February. This advancement action cleared all 3rd class selectees from August 1974 exam except late exam candidates and discrepancy cases. The advancement figures include USN/USNR and TAR candidates. Notifications by rate and pay grade are being sent out by the Navy Education and Training Program Development Center.

• FUNDS REQUESTED FOR MORE NAVY FAMILY HOUSING UNITS

Funds to build 3900 Navy family housing units were requested in the Navy budget submission for the FY 75 family housing construction program. The request included funds for the following locations and units: San Diego, 620; Jacksonville/Cecil Field, 200; Oahu, Hawaii, 700; New Orleans, 200; Cherry Point, 300; Camp Lejeune, 200; Charleston, 526; Bremerton, 332; Guantanamo Bay, 200; Keflavik, 200; and Norfolk, 422.

• MICHIGAN APPROVES VIETNAM VETERANS BONUS

A state bonus for Michigan residents who served in the armed forces during the Vietnam conflict was approved by voters in the November election.

Eligible for the bonus are servicemen and veterans who were Michigan residents for at least six months before entering active service, served honorably at least 190 days between 1 Jan 1961 and 1 Sep 1973, or died on active duty from service-connected causes. Time spent on active duty for training as a National Guard or Reserve member, as a cadet or midshipman at a service academy, or when assigned by military orders to full-time study at a civilian school will not count toward the 190-day period.

A bonus of $600 was approved for "combat veterans" who earned the Vietnam Service Medal or Armed Forces Expeditionary Medal. Other Vietnam-era veterans are eligible to receive $15 for each month served during the 1961-73 period, up to a $450 maximum. Dual payments are prohibited. If the veteran is deceased, payment will be made to surviving husband or wife, child or children or the surviving mother or father.

Instructions for applying were to be released early this year. Deadline for bonus application is 30 Jun 1980.

• BICENTENNIAL COORDINATION OFFICE SEEKS YOUR IDEAS FOR U.S. 200TH BIRTHDAY

The Secretary of the Navy has established a Bicentennial Coordination Office which functions basically as a command center, and is responsible for the coordination of the Navy's participation in the Nation's Bicentennial, both at the national and local levels. The Under Secretary of the Navy, the Honorable D. S. Potter, has the overall responsibility for Navy's role in Bicentennial planning and he has appointed Captain B. C. Crawford, USN, as his Special Assistant for Bicentennial matters.

The Bicentennial Coordination Office (BCO) receives, analyzes, and follows through on ideas and suggestions concerning Bicentennial planning as it relates to the Navy. The BCO is interested in hearing from the field and the Fleet -- it wants your ideas on how the Navy can participate in Bicentennial activities, when the nation will celebrate its 200th birthday in 1976. Because of strict budgetary and manning limitations, the Navy's activities must rely on lively imagination, creativity, sharing of ideas and voluntary participation. Starting this month, the BCO will be distributing a Bicentennial Newsletter, and it says "Send us the word and we'll pass the word." BCO's staff is located in the Pentagon (2-B-344) and can be reached by telephone on OXford 4-1776 or 4-1976. The mailing address is: Bicentennial Coordination Office, Office of the Under Secretary of the Navy, Department of the Navy, Washington, D. C. 20350.

• MCPON CANDIDATES BEING SOUGHT FROM ALL COMMANDS

Nominations of candidates to relieve the Master Chief Petty Officer of the Navy (MCPON) are now being requested from all commands with master chief petty officers authorized or attached. The present MCPON, John D. Whittet, is scheduled for transfer this year. The MCPON is the principal enlisted assistant to the Chief of Naval Personnel and the senior enlisted advisor to the Chief of Naval Operations. Those master chief petty officers who are nominated must be adequately prepared to meet the position's demanding and challenging requirements, and not be chosen for candidacy simply as a reward for good and loyal service.

Selection will be based on command nominations, preliminary screening action by the March 1975 Senior/Master Chief Petty Officer Selection Board and final screening by a special selection board to be convened by the Chief of Naval Personnel. The new MCPON is expected to report to Washington for duty on 1 Aug 1975 and relieve MCPON Whittet on 1 Sep 1975. BuPers Notice 1400 gives specific requirements and procedures for making nominations.

• COMMISSARYMAN/STEWARD RATINGS NOW CONSOLIDATED; OTHER FUNCTIONS CHANGE

The Commissaryman (CS) and Steward (SD) ratings were consolidated on 1 January of this year to form the new Mess Management Specialist (MS) rating. A major feature of the new rating is that personnel in it will be responsible for food preparation and food service for both officer and enlisted messes. Training, study guides, correspondence courses and advancement exams for individual CS and SD ratings will be completely restructured and combined to accommodate the new MS rating.

A transition period will occur allowing for cross-training and for development of a single advancement exam. During this period three NECs will be used within the MS rating: MS/3501 for former commissarymen, MS/3502 for former stewards and MS/3503 for those fully qualified in the new MS rating concept. These NECs will be phased out when they are no longer required.

Persons in the new MS rating will not at the present time be eligible for a Selective Reenlistment Bonus (SRB) since plans call for it to be fully manned. In other changes, many food service jobs ashore currently filled by lower paygrade personnel will be civilianized. A messman pool afloat, drawn on a rotational basis from non-rated men on board, will assume some of the shipboard daily upkeep and maintenance duties now performed in officers' spaces by stewards. A number of these functions will become the responsibility of the individual officer. Commissarymen and Stewards will continue to wear their respective rating badges until a new MS rating badge has been chosen.

DO YOU HAVE CHILDREN ENTERING OR ATTENDING COLLEGE?

If you have children who are attending or who will enter college next fall, they may be eligible to compete in the Dependents' Scholarship Program. The program, managed by BuPers, consists of over 20 scholarship programs made available by Navy-oriented clubs and associations.

The scholarships are awarded by the sponsors of the awards on the basis of financial need, scholastic record, and character. Your personnel office has more details.

Request the Scholarship Pamphlet (NAVPERS 15003D) and the Application for Dependents' Scholarship Program (NAVPERS 1750/7) directly from the Chief of Naval Personnel (Pers-7311), Navy Department, Washington, D. C. 20370. If you have more than one eligible child be sure to specify the number of applications you need.

The deadline for receipt of applications and school transcripts in BUPers (Pers-7311) is 15 March 1975.

CHAMPUS GUIDELINES ON CERTAIN MEDICAL TREATMENT REVISED FOR DEPENDENTS

The Department of Defense has announced a change to interim guidelines regulating psychiatric care for military dependents under CHAMPUS. Navy dependents are still covered by CHAMPUS for 120 days of inpatient care per fiscal year for nervous, mental or emotional illnesses, but coverage for outpatient care has been increased from 40 to 60 visits per fiscal year. Claims for additional treatment beyond the 120 days of inpatient care and 60 visits for outpatient care will be reviewed on a case-by-case basis.

ANNUAL ALIEN ADDRESS REPORTS DUE THIS MONTH

All aliens who have been issued an alien registration card and are in the United States or one of its possessions must report their address this month (before 1 February)even though the address may be the same as last year. Address reports must be filed on official forms which are obtainable at any U. S. post office and may be returned to any U. S. post office when completed. If an alien is absent from the U. S. during the month of January and a report has not been filed, one must be submitted at the time of reentry. There are severe penalties for failure to comply with this law, including fine, imprisonment or deportation.

WADCOP SELECTEES GIVEN ALTERNATIVE COURSE TO OBTAIN COLLEGE DEGREE

When the Associate Degree Completion Program (ADCOP) was killed by Congress in September, WADCOP (Warrant Associate Degree Completion Program) died with it. Funds for both programs were deleted from the FY 75 appropriations bill, and ADCOP selectees were encouraged to apply for the Navy Campus for Achievement Program. Warrant officers who were selected for WADCOP but are not yet enrolled, along with all other warrants, are encouraged to apply for the College Degree Completion Program to further their education. This program offers naval officers a chance to get their baccalaureate degree, if they can do it within an 18-month period.

Officers selected for the program will receive their regular pay and allowances while attending civilian schools, and must pay their own tuition and other expenses. Veterans Administration G. I. Bill benefits may be used, but Navy tuition aid may not. Further information can be obtained from CNET Instruction 1520.4 of 15 Aug 1974.

- ELIGIBILITY REQUIREMENTS FOR SWO INSIGNIA

Officers who have qualified as surface warfare officers (SWO) after 9 Apr 1970 are entitled to wear the new SWO insignia. This includes unrestricted line officers, limited duty officers of the line and warrant officers classified as in the line. BuPers points out that once earned, the right to wear the insignia continues unless the SWO qualification is revoked. Qualification criteria are included in BuPers Manual article 1410270. Those who believe they meet these criteria may write the Chief of Naval Personnel (Pers-41) requesting determination of eligibility status.

- OUTSTANDING ENLISTED RESERVIST SELECTED FOR 1974

Electronics Technician 2nd Class Donald R. Filby has been selected from nearly 100,000 Reserve personnel as the Naval Enlisted Reserve Association's Outstanding Enlisted Reservist for 1974. He has been meritoriously promoted to 1st class and he and his family visited Washington, D. C., to meet with top Navy officials in recognition of his award.

Filby, a civilian electronics technician at the Long Beach Naval Shipyard, has served in aircraft carriers, air antisubmarine squadrons and Fleet tactical support squadrons in his 24 years of naval service. He was among the first Naval Air Reservists to be awarded aircrewman wings and served as a flight communicator on flights to Vietnam and other southeast Asia countries.

- SECNAV APPROVES 702 AWARDS FOR POWs

SecNav has approved 599 awards for 138 Navy men who were prisoners in North Vietnam. Presentations of the awards were delayed pending Congressional action to lift the statute of limitations on certain awards. An additional 103 awards were authorized for 78 former crewmen of USS Pueblo who were detained in North Korea. Approval of the awards was held up pending the lifting of the statute of limitations and a decision to delay the presentations until all POWs returned from North Vietnam.

- NEW EDITION OF UNIFORM REGS TO BE ISSUED SOON

The Navy Uniform Affairs Board has announced that the new edition of Uniform Regulations (NavPers 15665B) will be distributed early this year. The publication contains uniform changes made in the last year, and has been condensed, reorganized and indexed, making it easier to use. Some additions to the regulations include the new beret for women, the surface warfare officer insignia and the blue single-breasted vest for men. Other changes are the phase-out of the formal dress white uniform for women, inclusion of the tropical formal "Gulf Rig" uniform for male officers and chief petty officers, and authorization for enlisted women to wear men's working dungarees. Information on existing uniforms can be obtained from the uniform board by calling autovon 222-4784/4785 or commercial (202) 692-4784/4785.

Questions and Answers

Training & Education

Q. ***Now that the United States Armed Forces Institute (USAFI) has been dropped, what is taking its place?***

A. A new organization designed to handle the credit-by-exam system formerly administered by USAFI has been established at Pensacola, Fla. The Navy, acting as executive agent for the Department of Defense, will manage the program, called the Defense Activity for Non-Traditional Education Support (DANTES).

In addition to administering the credit-by-exam system, DANTES will also manage a new self-study program that will catalog education support available to men and women in the services. Under DANTES, General Educational Development (GED) tests will no longer be administered by military departments for activities located in the continental United States. Instead, personnel will be referred to state or local testing agencies to receive GED certificates. Overseas activities and deployed ships will continue to administer GED tests.

Q. ***What are the admission requirements for admittance to the Naval Academy?***

A. Admission is open to young men of good moral character, without regard to race, creed or national origin. Candidates must be male citizens of the U. S., never married, who are at least 17 years but not past 22 on 1 July of the year of admission. They must be unmarried and have no children.

More information about the academy and its requirements can be obtained from the Naval Academy Information Officer in your area; high school guidance counselors; a local Navy recruiter; the West Coast Regional Candidate Guidance Office, NAS Drawer A, Moffett Field, Calif. 94035; or from the Candidate Guidance Office, U. S. Naval Academy, Annapolis, Md. 21402.

Q. ***What will be the entrance requirements and how does one apply or find information on the new University of Health Sciences being established in Bethesda, Md.?***

A. Present planning of the Uniformed Services University of Health Sciences includes the possibility that the first students may enter the university as early as 1976. The university will be authorized to grant appropriate advanced degrees in the health sciences, and it may establish post-doctoral, postgraduate and technological institutes. Definite procedures for the selection of students have not yet been established. When those procedures are established, they will be given wide publicity. Further information can now be obtained by writing to the Executive Secretary to the President, USUHS, 6917 Arlington Rd., Bethesda, Md. 20014, or the Bureau of Medicine and Surgery (Code 3174) Washington, D. C. 20372.

Q. ***How does the fact that an applicant for the Navy Medical Scholarship Program is already in an initial warfare speciality area (nuclear-trained submarine qualified officer, for example) affect his chances for selection?***

A. All officers on active duty who will have completed two years of active commissioned service before being placed in the program are eligible, with certain exceptions. Nuclear power trained officers, submarine or surface, must have completed an assignment as a department head or have passed the seniority of those officers so assigned. In addition, nuclear power trained submarine officers serving under an agreement for Nuclear Submarine Officer Continuation Pay must be serving within one year of the completion of the four-year obligation as an unrestricted line officer.

Q. ***What year groups were considered by the FY 1976 PG Board, and will be considered by the Service College selection boards for attendance commencing in FY 76?***

A. Year groups to be considered by the PG selection board will be:

11XX—Non-nuclear trained officers—60, 63, 66, 69, 72
11XX—Nuclear trained and all 13XX officers—59, 62, 65, 68, 71

Year groups to be considered by the service college selection board are:

Senior—54b, 58a, 59b—60a
Junior—64, 66b

Q. ***On a small ship with only one (or no) machinery repairman attached, his services are sometimes needed***

when he is not on board. Is there a Navy school where other men can be trained to fill this gap?

A. The Naval Development and Training Center in San Diego offers a four-week Basic Machine Shop course for engineering personnel. It teaches shop safety, mathematics, blueprint reading and sketching, layout procedures, grinder operations, use of hand tools, precision measuring instruments and various lathe operations. Quotas can be obtained by writing the Commanding Officer, Naval Development and Training Center, Fleet Maintenance Assistance Group, Pacific, Box 106, Naval Station, San Diego, Calif. 92136.

Q. ***What type of training are those going into the Master-at-Arms rating receiving?***

A. MAs receive five weeks of training at the Air Force law enforcement specialty training program at Lackland AFB, San Antonio, Tex. The program includes courses in firearms; riot control; unarmed combat; investigative techniques; fingerprinting; processing and preserving evidence; apprehension, search and seizure; MA administrative procedures; correctional center orientation; and military law.

Advancement & Career

Q. ***BuPers recently revised the enlisted advancement system. How does it differ from the old system?***

A. Under the new system, exam scores will count as a smaller percentage of the final multiple. Job performance and leadership, based on performance evaluations, will count for more. The final multiple values of time-in-service, awards and PNA (passed, not advanced) points will remain the same.

The exam score will now make up about 35 per cent of the final multiple for E-4s and 5s, and about 30 per cent for E-6s. Under the old system it was 40 per cent for all three rates.

A final multiple score will now also be given to prospective E-7s, E-8s and E-9s to determine who will go before the selection board for advancement. In the old system a standard exam cut score ensured that 7590 of all who took the E-8 and E-9 exam and 50 per cent of the E-7 candidates would go before the board. Exam scores will now make up 60 per cent of the candidates' final multiple for E-7s, 50 per cent for E-8s and 40 per cent for E-9s. Leadership will count 40 per cent for E-7s, 50 per cent for E-8s and 60 per cent for E-9s. Once before the selection board, exam scores will have no special value. Board members will be free to select the best "whole man."

The new plan was put into effect for E-4s, 5s and 6s with the August 1974 advancement exam. It will be applicable for the three top pay grades commencing with the FY 1975 exam cycle.

Q. ***Why was this new advancement system created?***

A. The plan is designed to benefit good performers who have not been able to advance because their exam scores fell just below the cutoff. By lowering the value of the exam score and emphasizing performance in the final multiple, those who have repeatedly demonstrated knowledge of their job and leadership ability will not be penalized because they may have difficulty passing a written exam.

Q. ***Where can I learn the latest news about such things as when advancement exams will be released, effective dates of frocking, how to order substitute exams or late additional promotions?***

A. These questions can be answered by the Records Branch of the Naval Education and Training Program Development Center (formerly a function of the old Naval Examination Center at Great Lakes). Their autovon number is 922-1353; 904-452-1353 commercial. However, only the CO, XO, ESO or personnel officer should call since the autovon and commercial lines are incapable of processing the number of calls if unrestricted.

Q. ***Now that the initial manning requirements for the newly created Master-at-Arms (MA) and Navy Counselor (NC) ratings have been met, how can I convert to one of these ratings?***

A. The conversion of E-5s and above (only) to MA and E-5 and E-6 to NC is now being made by individual special request. Those who are eligible for advancement must submit to BuPers an Enlisted Transfer and Special Duty Request (NavPers 1306/7) asking for authority to change rating through participation in the NC or MA advancement examination. Candidates for NC must also take the "Sales Aptitude Battery" tests administered by the Navy Recruiting Command.

Complete details for conversion to MA and NC are given in BuPers Notice 1440 of 8 Jul 1974, and all forms are now available. Additional requirements for conversion to MA are being studied at this time and, if approved, will be promulgated in a change to the BuPers Manual.

Q. ***What is the current policy on formal command screen boards?***

A. Until recently, formal command screen boards were used only in the selection of COs in the grade of CDR and CAPT. ChNavPers has expanded the concept to include the selection of COs and XOs, LCDR and senior. Exceptions are surface CDR XOs who are selected by informal board action.

Q. ***How is officer retention measured?***

A. Officer retention is defined as the number of persons who are on active duty two years after completion of their minimum service requirement (MSR) compared to the number who were on board in the examined group one year prior to completion of their MSR. The reason these two points are used is that, historically, 80 per cent of those who resign from the Navy do so during the period from MSR to MSR plus two years.

Q. ***Why did the Navy implement a revised report on the fitness of officers?***

A. For the purpose of promotion and assignment, a more meaningful and accurate form was needed to assist in these managerial decisions. The revised report was designed to evaluate the ability to manage people as well as get the job done, focus on specific observable behaviors, better distinguish among different levels of performance, and facilitate appraisal discussions between reporting seniors and their subordinates.

Q. ***With the prospect of only three squadron tours in my aviation career, which includes command, how will I be able to meet the requirements of the aviation career incentive pay (ACIP) gate system?***

A. There are many opportunities both ashore and at sea in other than operational squadrons where aviation officers can accrue operational flying time. These assignments ashore include Training Command and RAG instructor duty; RDT&E aircrew in OpTevFor; VX and NATC Patuxent River; and Naval Air Stations. At sea, there are many operational flying assignments on CVW staffs and on CV/CVAs and LPHs.

Q. ***What is the Warrant Officer Food Service Program and where can I get more information about it?***

A. OpNav 21 of January 1973 announced establishment of the Warrant Officer (799x) and Limited Duty Officer (371X) designators in the career Food Service field. The program is designed to bring greater professionalism and expertise to the food service function, and increase the prestige and visible importance of it within the Navy personnel structure. Approximately 100 billets afloat and ashore have been tentatively identified for ultimate conversion to 799X. Those WOs holding the 799X designator will be split evenly between large afloat messes and messes ashore.

Enlisted personnel may apply for the WO program in accordance with BuPersMan 1020310 citing 799X (Food Service) as designator preference. In addition to appointments from enlisted status, a limited number of lateral conversion opportunities are also available. Requests for conversion should be forwarded in accordance with BuPersMan 1430120. At present, the Limited Duty Mess Management Officers (371X) will be drawn from the Food Service WO community.

Because of present officer strength constraints, only about five to 10 Food Service WOs will be appointed annually for the next several years.

Further questions about the WO and LDO Food Service Programs may be sent to: Naval Supply Systems Command, (Code SUP OP32), Navy Department, Washington, D. C. 20376, or telephone Autovon 224-1615.

Navy Enlistment Bonus

Q. ***What are the eligibility requirements for the Navy's new enlistment bonus?***

A. The enlistment bonus will be paid to designated individuals enlisting in the Regular Navy in an eligible rating for a minimum of four years who: (1) Are high school graduates (or meet Navy GED standards) and meet the entrance requirements for the rating and class "A" school. (2) Successfully complete the course of instruction required and/or attain designation in the guaranteed rating. (3) Sign an agreement to extend enlistment for at least 12 months. If additional obligated service is required for other programs or options, these may be served concurrently provided total obligated service equals at least five years. Total extensions may not exceed 35 months. (4) Sign an agreement stating that failure to fulfill these criteria will nullify the enlistment bonus and obligate the individual to serve the period of the basic enlistment.

Complete details of the Enlistment Bonus can be found in BuPers Instruction 1130.23 of 24 Aug 1974.

Q. ***What ratings must one enlist in to be eligible to receive the Navy's enlistment bonus, and what are the bonus amounts?***

A. As of 1 Sep 1974 they are: CTI ($1500), CTR ($1500), CTT ($1000), EW ($2000), GMM ($1500), GMT ($2000), MN ($1000), and TM ($1500).

Q. ***Can a Reservist receive the enlistment bonus?***

A. Naval Reserve personnel *not* on active duty can receive the enlistment bonus if: (1) they meet eligibility requirements (2) they enlist in the Regular Navy in one of the eligible ratings and (3) they have not received or are not presently entitled to a reenlistment bonus (including RRB, VRB or SRB).

Q. ***If I have broken service can I receive an enlistment bonus?***

A. Yes, if: (1) you meet eligibility requirements (2) you reenlist in one of the eligible ratings and (3) you have less than five years of total active military service and have had a break in service longer than three months.

Additionally, if you have established eligibility for the enlistment bonus via "A" school you must come back into the Navy as an E-3 or below.

Q. ***If I have broken service and reenlist for the enlistment bonus will I be eligible for a Selective Reenlistment Bonus (SRB) later?***

A. Yes, but you must wait until the enlistment for which you have received an enlistment bonus has ended before you can reenlist or extend for SRB. An individual will not be paid both an enlistment and a reenlistment bonus for the same period of military service, nor will an enlistment bonus be paid more than once to any individual.

Veterans Benefits

Q. ***I entered the Navy before completing high school, and recently was honorably discharged after two years of duty. Can I get free GI bill benefits from the Veterans Administration while finishing high school?***

A. Yes. Veterans in your category may receive educational assistance without charge against basic entitlement. We suggest you apply to the VA regional office in your state for this benefit.

Q. ***What is the VA "VetRep" or Man on the Campus Program I keep hearing about?***

A. It's an all-out effort by the Veterans Administration to ensure prompt delivery of GI Bill educational assistance checks, and otherwise "trouble-shoot" other problems which arise on college campuses between the veteran, the school and the VA regional office. Veterans benefits counselors and veterans themselves, called "VetReps," will function as expediters, assisting veterans in the program which began this fall.

Q. ***Are female as well as male veterans a target of the Veterans Administration's "outreach" program which encourages high school dropouts to take advantage of GI Bill education benefits?***

A. Yes, but fewer of the female veterans are educationally disadvantaged. According to VA statistics, only two of every 100 women Vietnam-era veterans had not completed high school before separation from military service.

Q. ***I was honorably discharged last month after three years of military service, and I'm thinking of applying for a GI home loan from the Veterans Administration. What are some of its advantages?***

A. Because VA guarantees 60 per cent of loans—up to maximum of $12,500—down payments are either small or not required, and there is usually a long repayment period (up to 30 years) with no penalty for early repayment. Also, VA appraises the house to determine reasonable value.

Q. ***How long do I have to repay a Veterans Administration GI home loan?***

A. That depends upon the terms you agree to with a private lender. The maximum term on a home loan is for 30 years. Farm loans may be financed for 40 years.

Q. ***Where can I obtain a pamphlet on CHAMPVA, the Veterans Administration's medical care program for dependents and survivors of veterans and servicemen?***

A. Copies are available at VA hospitals, clinics, domiciliaries, regional offices and veterans assistance centers.

Q. ***My husband recently retired after 20 years of military service. Am I eligible for CHAMPVA, the Veterans Administration's health care program?***

A. No, dependents of military retirees are not eligible for CHAMPVA. However, you probably are eligible for the military's health care program, CHAMPUS.

Q. ***As the widow of a veteran who died of a service-connected disability, am I entitled to commissary privileges?***

A. Yes, if he was rated by the Veterans Administration as totally disabled from service-connected causes at the time of his death.

Q. ***Do Veterans Administration hospitals and clinics treat Reservists injured while reporting to or returning from military training?***

A. Yes, provided injuries and illnesses occur during travel time as specified in the Reservists' military orders. Both active duty training and inactive duty training are considered active duty for this purpose.

Q. ***I recently read about "Vetreach." Is this a Veterans Administration program?***

A. Vetreach is a program sponsored jointly by VA and ACTION, enlisting the use of Volunteers in Service to America (VISTA) members who are Vietnam-era veterans. The program's purpose is to assist other veterans who, because of education or economic barriers, have failed to take advantage of VA benefits.

Q. ***I received an honorable discharge from the Navy two years ago, and plan to live abroad starting next year. A friend told me I should check with the Veterans Administration before departing. Why?***

A. To be apprised of how residence abroad affects your veterans' benefits. For one thing, you should get a statement of your service-connected disabilities (if you have any) from the VA office which maintains your medical records. The statement and an application for medical benefits should be presented to the American Embassy or consular office in the country of travel or residence, should the need arise.

Q. ***As a Ready Reservist, am I eligible for Servicemen's Group Life Insurance (SGLI) issued by the Veterans Administration under a recent law?***

A. Yes. Under the Veterans Insurance Act of 1974 servicemen on active duty and Ready Reservists are insured automatically under SGLI for $20,000. However, they may elect $5000, $10,000, $15,000 coverage, or no coverage.

Questions You Never Thought To Ask..... But Here Are The Answers Anyhow

for the Navy Buff

Stump your shipmates, win a bet, show that history buff chief he doesn't really know it all, or just clutter up your otherwise brilliant mind with this potpourri of little known facts about the Navy—questions you may never have thought to ask, but might like to know the answers to anyway.

Q. ***When did the Navy stop using holystones?***

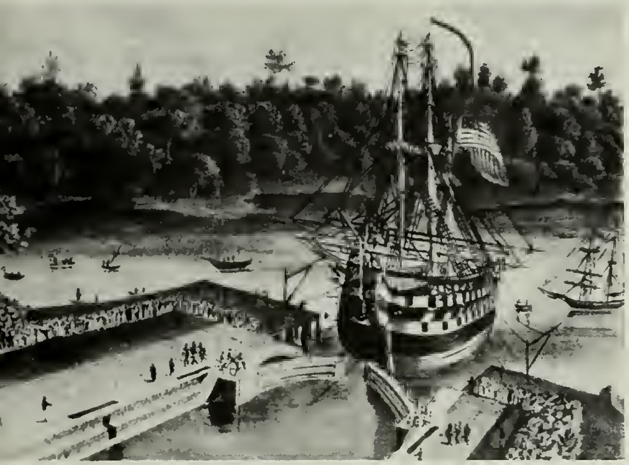
A. Officially, this delightful job was discontinued on 5 Mar 1931 when General Order 215 stated: "The use of holystones for cleaning the wooden decks of naval vessels wears down the decks so rapidly that their repair has become an item of expense to the Navy Department. It is therefore directed that the use of holystones or similar material for cleaning wooden decks be restricted to the removal of stains." Unofficially, we suspect some old boatswain's mates couldn't get used to their decks not being a brilliant white all the time and continued holystoning for many more years, General Order or no.

Q. ***I heard that a gun used to be fired every evening at 2100 at the Norfolk Navy Shipyard. Why?***

A. Because on 4 Sep 1886 (then) Navy Yard Commandant Rear Admiral Stephen C. Rowan wanted his boys home by 2100 each evening. He ordered the gun fired from the receiving ship as a curfew signal. Eventually, the good citizens of Norfolk began to look forward to the gun and, regardless of where they were, would break out their watches, cast an eager eye on the mantlepiece clock and wait for the roar of the nine o'clock gun.

The custom was stopped between 1907 and 1909 by

A more recent photo of Norfolk Naval Shipyard



Norfolk, then known as Gosport Navy Yard, in 1833

Battleship USS Texas (No. 1)

order of yard commandant Admiral E. D. Taussig. The people of the community, who had by now come to expect the sound of the gun each evening and to depend on it for the correct time, roared themselves over this order. But, in spite of their pleas, ADM Taussig refused to restore the gun. Still determined, the citizens took their demands all the way to the White House where President Taft ordered the gun to be fired again.

Q. ***What was the first U. S. submarine to round Cape Horn?***

A. USS *Sea Robin* (SS 407) while on a training cruise in 1947.

Q. ***Why is the island always located on the starboard side of an aircraft carrier?***

A. Aviation customs, influenced by the fact that engine torque of prop planes tends to pull them to the left. Traffic patterns for aircraft normally are set up for left-hand turns in rendezvous, approaching and taking off from airports, and so forth. Consequently, in early carriers, landing signal officers were stationed on the port quarter of the flight deck and pilots approaching in a short left turn could keep them in view easier. If a plane was waved off, the sudden surge of power from its engine would pull it to the left away from the island structure and the air turbulence surrounding it.

Q. ***When was the first missile fired from a Navy ship?***

A. The first "large bombardment rocket," as it was called, was a captured German V-2 rocket launched from USS *Midway* (CVB 41) in November 1947. It was an experiment to determine if this could be done without requiring modifications that would affect flight operations. Although the 45-foot, 14-ton rocket flew a grand total of only six miles, the experiment was considered a success.

Q. ***When was the first jet flight made off a U. S. carrier?***

A. In the summer of 1946 an XFD-1 (*Phantom*) was launched from USS *Franklin D. Roosevelt* (CVB 42) off the Virginia Capes.

Q. ***What was the first squadron of jet planes formed for service on an aircraft carrier?***

A. VF-17A, formed at NAS Quonset Point in November 1947. It used FD-1 *Phantom* jets.

Q. ***What was the first U. S. Navy ship to be air-conditioned?***

A. Around 1905 Navy dreadnaughts were given climate-controlled waist magazines to safeguard powder. This was probably a first. About 1925 certain battle stations which had to be completely closed to protect personnel and equipment from water, smoke and chemicals were routinely fitted with mechanical cooling systems. Beginning with the *Essex*-class carriers in 1942, aviators' ready rooms were air-conditioned so the fliers could stay in heavy flight clothes while on alert.

In June 1934 USS *Cuttlefish* (SS 171) was the first submarine to have air-conditioning installed during construction. Subs had complete air-conditioning throughout World War II. USS *South Dakota* (BB 57), commissioned in 1942, was the first ship to have air-conditioned hospital spaces, and USS *Haven* (AH 12), the first hospital ship to have living quarters air-conditioned.

During WW II early reports from the South Pacific made it clear that heat exhaustion was a tactical factor in ship design, but wartime labor and material shortages made it impossible to install air-conditioning on new ships. At least the Japanese didn't have it either, and the war was fought on equal terms in this respect.

Following the war, experiments were conducted at the Naval Medical Research Institute, Bethesda, Md., and aboard USS *Franklin* (CV 13). It was found that men who slept in air-conditioned spaces rested better and as a result were more efficient in their jobs. In 1947 the heavy cruisers USS *Newport News* (CA 148) and USS *Salem* (CA 138) were completed and became the Navy's first surface ships to be built with completely air-conditioned interiors, except for machinery spaces. Speaking of this experiment, Vice Admiral E. L. Cochrane, then ChBuShips, said, "The Navy is not trying to mollycoddle its personnel . . . it is to improve the battle effectiveness that this is being done."

Q. ***USS Holland, the Navy's first submarine—how did she end her days?***

A. Unfortunately, on the scrap heap. *Holland* was bought by the Navy for $150,000 and commissioned on 12 Oct 1900. The 53-foot, 74-ton boat was used for the next several years as a training and experimental vessel. In 1910 she was stricken from the Navy list and eventually sold to a scrapper. He requested, and received, permission to put her on public exhibition in 1915, but her scrapping seems to have been completed in 1917-18.

Q. ***Has Navy pay ever been reduced?***

A. Don't tell anyone, but it was reduced 15 per cent by an act of 30 Jun 1932. The act is no longer in effect.

Q. ***What was the water capacity of a battleship?***

A. It varied with class. A BB of the *Tennessee* class carried 245,597 gallons, or 913 tons. The larger *Iowa* class had a capacity of 551,450 gallons, or 2050 tons. But, with a wartime complement of over 2800 men they probably still had to go on water hours.

Q. ***Where did saluting ever get started?***

A. Probably with knights of old who raised their helmet visor when meeting a member of the same order or a friendly order. It was a sign of chivalry and respect, or maybe it was just to show their faces to their friends to keep from getting chopped by a broadax. The custom was handed down by tradition and evolved to juniors uncovering when meeting or addressing their seniors. Eventually that was shortened to just touching the hat brim, or a lock of hair if uncovered. Saluting was passed from the British Army to the British Navy and then to the American Navy.

The British, and some others, salute with the palm of the hand outwards. It is believed this practice originated in days of yore to show that nothing was hidden in the hand.

Q. ***I have heard that early U. S. Navy missile development was aided by the use of World War II German equipment. True?***

USS Harriet L

A. True. In April 1947 the Bureau of Ordnance (now a part of the Naval Sea Systems Command) announced that der Fuhrer's supersonic wind tunnel from Peenemunde, used to test V-1 and V-2 rockets, was to be installed at the new Naval Ordnance Laboratory, White Oak, Md. Until then, no U. S. wind tunnel had been built that could generate winds as swift as could the German tunnel. It created speeds of about 3600 mph (Mach 4.4) by building up a vacuum in a large chamber, then suddenly opening a quick-release valve which allowed air to be sucked into the chamber.

Q. ***It is unlikely we will ever see another battleship in commission. Just how big were these magnificent giants?***

A. The most recent BB in commission, *New Jersey* (BB-62), was among the largest ever built. She was 887.6 feet long, with a 108.2 foot beam and drew 38 feet of water. She displaced 59,000 tons fully loaded. Eight boilers fired four geared turbines which turned four shafts and drove her to 33 knots (although she has reached 35 knots). Over 50,000 barrels of fuel oil

USS Canberra (CA 70)

Great White Fleet

were required to feed these boilers.

Her designed complement was 169 officers and 2689 enlisted men during wartime. In Vietnam she was manned by only 70 officers and 1556 enlisted men because of the removal of all light antiaircraft guns, float planes and reduced operational requirements.

Originally, this class was armed with nine 16-inch-50s, 20 5-inch-38s, 80 40mm and between 49 and 60 20mm antiaircraft guns. The BB's main 16-inch batteries could hurl a 2700-pound projectile a maximum distance of 23 miles—with legendary accuracy. As built, *New Jersey* had three float planes for scouting and gunfire spotting which were launched from quarterdeck catapults. These were removed when she served in Korea and helicopters were added.

This class BB was the most heavily armored U. S. warship ever built. The main armor belt was 12.1 inch steel, 13.5 inches aft of Turret No. 3 protected the shafts, six-inch-thick armor was above the second deck and the three-level conning tower sides were 17.3 inches thick with a 7.25-inch-thick "roof." A BB's approximate cost in the early 1940s was $114.5 million.

Q. ***What was the first hospital ship built for the Navy?***

A. USS *Relief* (AH 1) was the first hospital ship built *from the keel up* for military hospital purposes. Her keel was laid in 1917, but construction was interrupted by World War I. She was finally finished in 1920, and decommissioned in 1946.

USS *Bountiful* (AH 9) was built earlier, but was originally USS *Henderson* (AP 1). She was not converted to a hospital ship until 1944.

Incidentally, *Relief* was at one time the butt of perhaps the Navy's worst gag: "What ship carries the biggest gun?" The answer: "*Relief.*" Scuttlebutt had it that an 18-inch gun barrel, manufactured for Bureau of Ordnance experiments, was fixed in her keel for ballast. The story has been told about many other auxiliary types using 14-, 16-, and 18-inch guns. We suspect they were all rumors started by sailors arguing about the "best ship in the Navy."

Q. ***Captain Isaac Hull—was it a quirk of fate that put him in command of* Constitution *during her famous battle with* Guerriere *when she won the nickname "Old Ironsides?"***

A. It was. In 1810 Hull was in command of the frigate *President*. Captain John Rodgers was then in command of *Constitution*, but he thought *President* was a faster ship. Being Hull's senior, he arranged for a swap. Unfortunately for him, the rank-has-its-privileges adage sometimes backfires. But perhaps it was the man, not the ship, that made the difference. Hull was an extraordinary seaman and could probably have done just as well in *President*. The real quirk may be that we do not now honor *President* as "Old Ironsides."

Q. ***What's a "dipsey"?***

A. Not, as you might think, a dumpster that we all had to guard diligently in boot camp. "Dipsey" is really a corruption of the name Deep-Sea Lead, an instrument used in the days of sail to take soundings. In use, the boatswain's mate would hang a 30- to 100-pound lead weight over the bow and attach a long, heavy line to it. This line was stretched aft along the rail and at regular intervals men would be stationed to hang on to it.

When all was set, the boatswain's mate would throw the lead free of the ship, which was stopped or nearly so, and would sing out "Watch-ho, watch." Each man in turn waited until he felt the weight of the lead, payed out his line and then sang out the same as the boatswain. When one man failed to feel the weight of the lead he quickly read the marks on the line and they had the approximate depth of water.

Q. ***The sword has long played a part in naval tradition, and officers now wear one on "full dress" occasions. When was the sword officially made a part of the naval uniform?***

A. That badge of honor and rank has played a big part in history as far back as Roman days when it meant authority. The sword was used in the American Navy from its beginning, but did not officially become part of the U. S. Navy uniform until 1813. A special provision in uniform regulations that year stated that officers must wear "cut and thrust swords with yellow mountings" on special occasions.

By 1886 the regulations became more explicit, stating, "The sword for all officers shall be a cut and thrust blade, not less than 26 nor more than 32 inches long; half-basket hilt; grip white; scabbards of black leather and mountings of yellow gilt." It remains essentially the same today.

Q. ***Is it true that the only U. S. Navy blimp lost during World War II was torpedoed by a submarine?***

A. Not exactly torpedoed. On 18 Jul 1943 a U-boat surfaced in the Florida straits and machinegunned down the blimp K-74. She was a sitting duck when her bomb-release mechanism failed to let go her bombs at point-blank range on the lucky sub. In the 550,000 flight hours logged by blimps in the war she was the only one lost to enemy action.

Q. ***Was Captain James Lawrence, of 1812 War fame, killed by a shot in the knee in the battle when he said "Don't give up the ship"?***

A. Not exactly, the first wound he received was a pistol ball below the knee; later he took a musket ball in the groin. He died four days later, probably from a loss of blood.

Incidentally, what he actually said to the ship's surgeon was: "Go on deck, and order them to fire faster and to fight the ship till she sinks; never strike; let the colors wave while I live." Then again, ". . . fight the ship till she sinks. The flag shall wave while I live." And finally, "Don't give up the ship. Blow her up."

Q. ***I read somewhere that Paul Revere, of midnight ride fame, built some ships for the American navy? Did he?***

A. No, but he helped fit out many. When *Constitution* and *Essex* were being built near his workshop in Boston, Revere, being a businessman with a future and a shipwright of note, put a bid in to furnish copper and brass for them. He didn't get the contract, but he did sell Congress $3820.33 worth of dovetails, nails, bolts, sheaves and large copper blocks for *Constitution.*

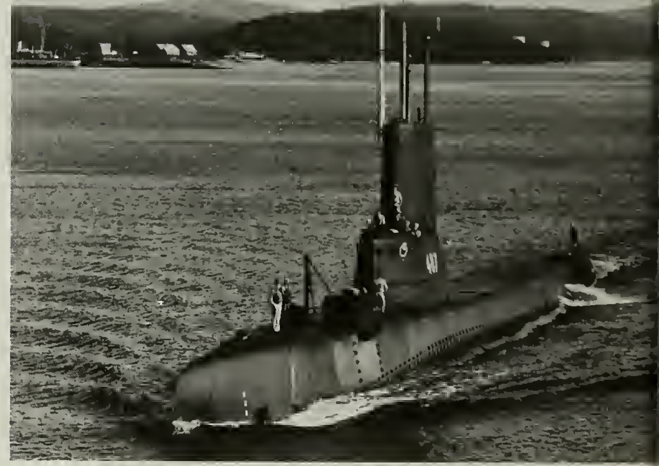
Later, when *Constitution* was about to set out to clean up the Algerian pirates, Revere overhauled and recoppered her in Boston and cast her first bell. The firm of Revere and Son furnished copper and brass equipment for several other frigates from the Lynn Street shop in the following years.

Q. ***What was the first U. S. combatant vessel ever named for a woman?***

A. USS *Harriet Lane,* a Civil War sidewheel river gunboat. She was named for the niece of President John Buchanan and was transferred to the Navy from the Treasury Department in 1861.

A. ***What was the first U. S. Navy ship to carry radar?***

A. The old four-stacker, USS *Leary* (DD 158), had radar onboard for seagoing tests in 1937. Contrary to popular belief, by the time we entered World War II much of the Fleet had already been equipped with radar, although it was rather primitive. Further research and development during the war greatly refined it and made radar practical for many uses other than ship detection—navigation, meteorology and fire control for example.



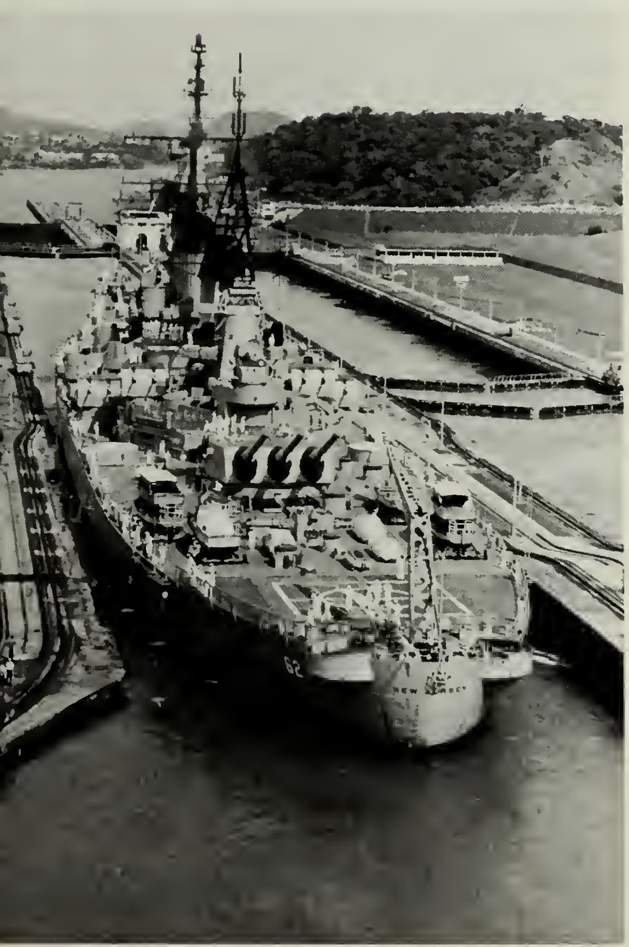
USS Sea Robin (SS 40

USS Constitution and Guerrie

Q. ***Where was* Constitution *built?***

A. Boston Naval Shipyard, you say? Wrong. It was

USS Holland


USS New Jersey (BB 62)

at that location all right, but when she was built there it was called Edmund Hart's Shipyard. The Harts were a family of shipwrights, and besides Edmund there were Edward, Zephaniah and Ralph the mast-maker. Before the government established its own dockyards, private yards were used for building national vessels. Hart's was known for a long time as "Hart's Naval Yard."

Q. ***What U. S. Navy ship has the distinction of being the only one to ever bear the name of a foreign capital?***

A. USS *Canberra* (CA 70). Canberra is the capital of the Australian commonwealth of New South Wales and USS *Canberra* was named in honor of an Australian cruiser which was named for that city and lost in World War II. The U. S. version was placed in commission on 14 Oct 1943 and was originally to be named USS *Pittsburgh.*

Besides this distinction, she was the first U. S. ship of WW II on which planning and construction were actually accomplished during the war. She also became the world's second guided missile cruiser, following USS *Boston* (CAG 1), when she was reclassified CAG 2 on 4 Jan 1952 and converted in 1956. USS *Canberra* reverted to her old CA 70 classification and hull number on 1 May 1968 and was decommissioned on 16 Feb 1970 and placed in reserve.

Q. ***Women always seem to christen Navy ships; was this always the case?***

A. No, the first woman to christen a U. S. Navy ship was a Miss Watson of Philadelphia on 22 Oct 1846. She broke the bubbles over the bow of the ship of war *Germantown.* It has, however, always been the custom to station a man in the ways to break a second bottle of champagne on the vessel in case the first should fail to break or there was a miss (nothing personal, ladies, that's the custom). Superstition has it that if the ship isn't christened properly she will always be dogged with bad luck.

Q. ***Who was the U. S. Navy officer who served briefly as Commander in Chief of the Mexican Navy?***

A. Commodore David Porter (Admiral David Dixon Porter's father) from 1824 to 1829. It seems that while operating in the West Indies cleaning up the pirate mess there, he got into a spat with local authorities. Certain indignities against American interests and insults to an American lieutenant by Spanish officials in Puerto Rico led Porter to interfere and force an apology from them. This didn't set too well with the State and Navy Departments and he was suspended for six months by a court-martial. That didn't set too well with Commodore Porter so he resigned his commission and entered the Mexican service. Returning to the U. S. in 1829, he was appointed consul general at Algiers and subsequently, in 1831, became the U. S. Minister at Constantinople where he died on 28 Mar 1843.

Q. ***The rank of Admiral of the Navy—(1) Has there ever been such a rank? (2) How many officers held it? (3) Is it still in effect? (4) Is it higher than Fleet Admiral?***

A. (1) Yes, an act of Congress on 2 Mar 1899 created the permanent rank of Admiral of the Navy. (2) Only one, George Dewey. (3) No, the act that authorized it for Dewey also provided that when the rank was vacated by death or otherwise, it would cease to exist; it was created for Dewey alone. (4) No official comparison of the two ranks has ever been made.

Q. ***When did the Great White Fleet make its famous cruise? How many ships were in that fleet?***

A. The fleet left Hampton Roads on 16 Dec 1907, cruised westward around the world and returned to its starting point on 22 Feb 1909. Sixteen U. S. battleships made up the fleet. Incidentally, the term "Great White Fleet" was never used officially.

Q. ***The Navy, and the nation, observes the week from Sunday to Sunday that includes 9 October as Fire Prevention Week. Why?***

A. On 9 Oct 1871 the great "Chicago Fire" raged through the city, killed 250 people and destroyed 17,430 buildings.

Q. ***Everyone knows USS*** **Constitution, *"Old Ironsides," is tied up in Boston. Where is her sister ship*** **Constellation *moored?***

A. Baltimore, Md., of course.

Q. ***What was the first U. S. Navy ship to be built from the keel up as an aircraft carrier?***

A. USS *Ranger* (CV 4). She was also the first American carrier to cross the Arctic Circle, in case you knew the first answer.

Q. ***World War II generated some pretty good ideas, and some pretty crazy ones. The wildest we've heard was the plan to build an aircraft carrier of ice. Did it ever get past the idea stage?***

A. The "Habbakuk Project," as it was called, got as far as the model-building stage when a 60-foot, 1000-ton mock-up was built at Patricia Lake, Jasper, Canada, in the winter of 1943. The whole idea was scrapped in December 1943 because of too many technical headaches and the easing of the enemy submarine threat.

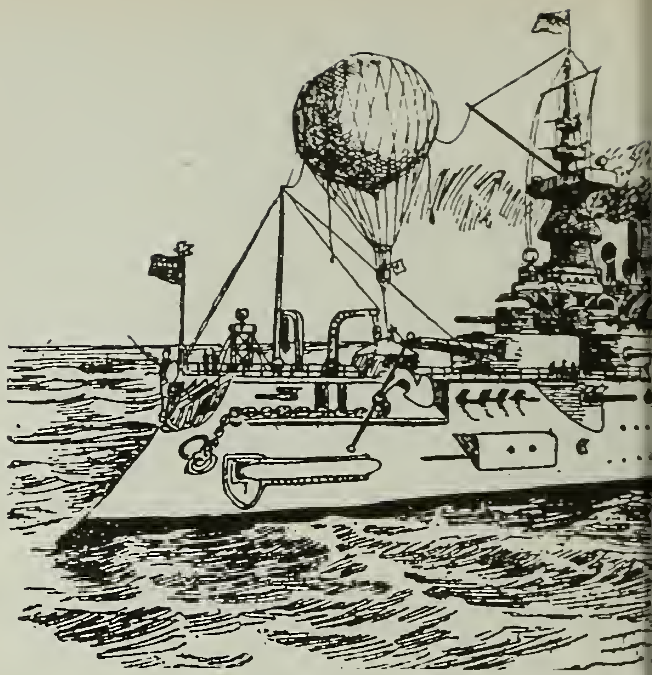
The original plans called for an aircraft carrier 2000 feet long, 300 feet wide and 200 feet deep. It was a joint American, Canadian and British effort and was to be the answer to the German U-boat menace.

Habbakuk was designed for the cold waters (naturally) of the North Atlantic, but was to have self-contained refrigeration machinery to keep from melting just in case she had to go south. Main propulsion was to have been electric motors attached to the outer skin. Engineers realized that ordinary ice would be too brittle, so they invented a substance called "pykrete" which was ice reinforced with from four to 14 per cent of wood pulp. They claimed this created a tough plastic solid which could be cut and worked like wood. They also claimed she could resist waves 1000 feet long and 50 feet high.

The main advantage of ice was that ordinary small-arms bullets just bounced off and that a torpedo hit would blast only an estimated three-foot-deep crater. Another advantage was an unlimited supply of ice to keep the ship's beer cold. The whole ice ship would have cost only $70 million.

Q. ***Battleships were named for states, cruisers for cities and subs for sea creatures, etc. What was the original system for naming missiles?***

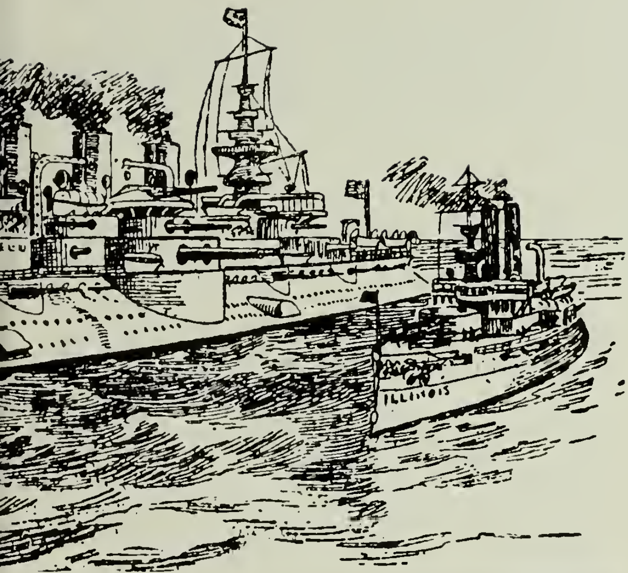
A. Air-to-air (AAMs) are named for reptiles and winged creatures (except birds of prey), e.g., *Sidewinder* and *Sparrow*. Air-to-surface missiles (ASMs) are named for sea birds, e.g., *Petrel.* Surface-to-surface missiles (SSMs) bear astronomical names, e.g., *Regulus*. However, when an SSM name occurs in both astronomy and mythology, only the astronomical name is used. Surface-to-air missiles (SAMs) are named for mythological characters, e.g., *Talos.*



USS Alf

There are some exceptions. The SAM *Tartar* doesn't follow the pattern, and the SAM *Terrier* "ain't nothin' but a hound dog," or at least a type of dog.

Q. ***USS*** **Nautilus *(SSN 571) was commissioned on 30 Sep 1954 and became the U. S. Navy's first nuclear submarine. What was the second?***



American Boy

USS Fulton

A. USS *Seawolf* (SSN 575), commissioned on 30 Mar 1957. She has been used mostly for research work since 1969.

Q. ***What was the U. S. Navy's first ship?***

A. The 24-gun frigate *Alfred.* The schooner *Hannah,* an earlier continental ship, was actually part of George Washington's army fleet.

Q. ***What is the biggest gun ever manufactured for the Navy?***

A. A big, fat 18-incher which was tested at the old Dahlgren Proving Grounds in the 1920s. Apparently the tests were unsuccessful for 18-inchers were never installed on U. S. ships. Contrary to what your old chief might tell you, one and only one of these giants was ever built according to published reports from the Bureau of Ordnance.

Q. ***Shortly before World War I there was supposed to have been built a huge battleship called USS* American Boy. She was supposed to have been 1000 feet long, displace about 85,000 tons and have a speed of 40 knots. This would have almost put even WW II's "Mighty Mo" to shame. Was there such a ship?**

A. Well . . . there is a report of an old newspaper clipping believed to have been extracted from a West Coast newspaper which stated that there was a "proposal to build a warship to be called *American Boy.* The money to be expended in the project, to be raised by popular subscription among the boys in the various cities of the United States, has proceeded so far that the money is not only largely in hand, but the plans for the battleship have been drawn up and are now in the hands of the Navy Department."

The report went on to say that she would have a battery consisting of "four 'monster' 15-inch guns, twelve 12-inch and four 10-inch," all of them to be breech loading. The secondary battery consisted of "two 12-inch 'dynamite' guns and 20 12-inch mortars." The *third* battery consisted of a "further array of formidable weapons including 100 6-pounders." All of this was to be capped (pardon the pun) by a ram weighing 48,410 tons.

American Boy was to have a 36-inch armor belt backed by eight feet of asbestos felt. Supplemental equipment included a 20-inch telescope, two war balloons, two submarine boats armed with cable shears, 300 auxiliary engines for "lifting supplies, moving guns, and the like, and oil sufficient to quiet a high sea and keep it still during 30 days."

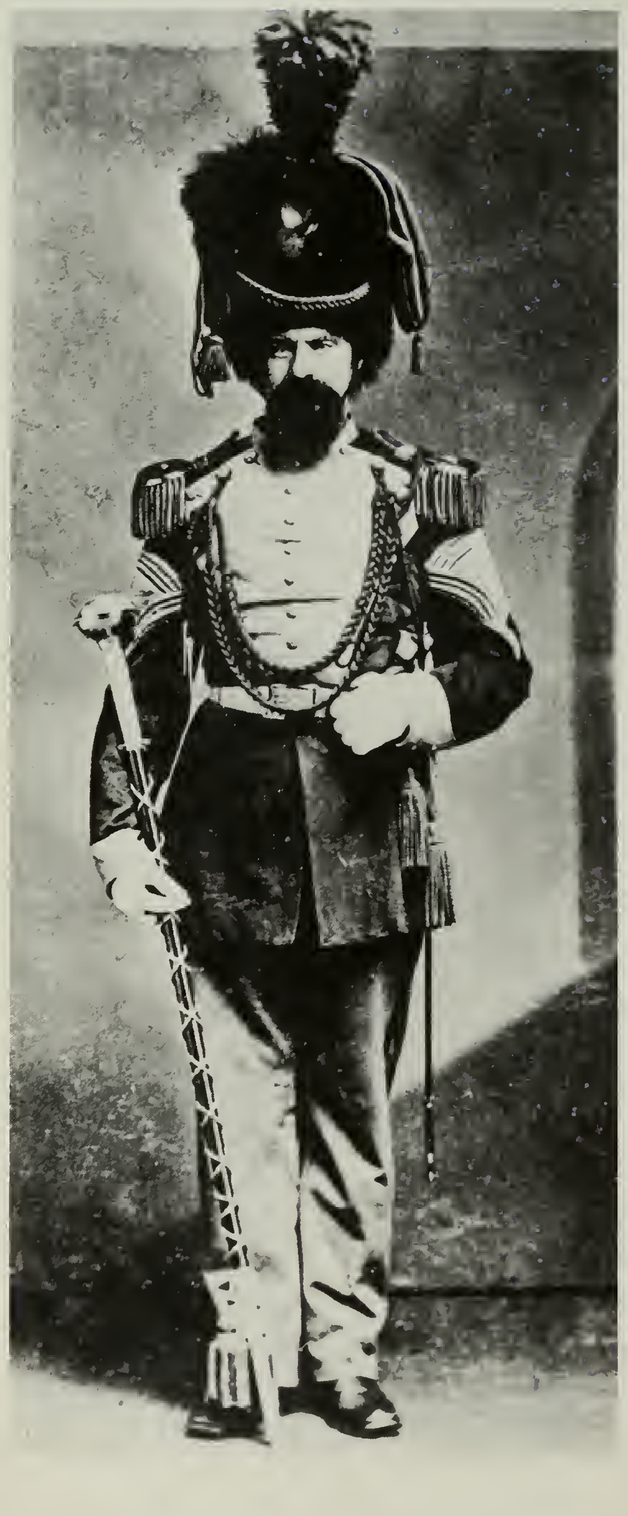
Some ship! But, the ram weight was almost half her displacement, and machinery of that era could not have possibly pushed her to 40 knots. *American Boy* seems to have been "sunk" without a trace after her first engagement with the press. Was it all a hoax dreamed up by an imaginative reporter? Maybe you can tell us more about "American Boy."

Q. ***What was the U. S. Navy's first steam-powered man-of-war?***

A. The *Demologs,* later to be officially designated Fulton I. In the War of 1812, Congress authorized Robert Fulton to build this unusual craft to break the tight English blockade of our ports. She was a twin-hulled, paddle-wheeled ship of 2475 tons, and 157-feet length. Each of the two hulls (with a combined beam of 65 feet) had its own keel, with an opening 15 feet wide and 66 feet long between them for the 14-foot-wide paddle wheel. The vessel had four rudders, one at each end of each hull, and could steam either end foremost with a maximum speed of about six knots.

She was never tested in battle because, by the time she was completed, peace had already been declared. The first steam warship used in combat was the converted harbor tug USS *Sea Gull.* She saw action against the Caribbean pirates in 1823.

Another proud tradition
"...and the band



History of the

Ever since the Naval Academy was founded in 1845, when the "band" consisted of a fifer and a drummer, music has been an important part of its life. On 22 Nov 1852, the Bureau of Ordnance and Hydrography issued an order which authorized for the Naval Academy "a band of music to consist of one master of the band at $18 per month, six musicians at $12 per month and five at $10 per month." In addition to these rather modest salaries, each man received a daily ration of one pound of salt beef or pork, flour, rice, some vegetables and a pint of wine or a gill (4 ounces) of whiskey. Three cents a day could be drawn in lieu of the spirit ration, but it is doubtful any such money was ever paid.

The task of organizing the new band fell to Bandmaster J. P. Pfeiffer, who began recruiting men in Boston. The musicians he selected were all Germans and included his two sons, John Jr. and David. On the morning of 7 May 1853 the barque *Union* dropped anchor at the mouth of the Severn River and set ashore the first Naval Academy Band members. They arrived in time to perform for the 1853 June Week festivities.

No money had been appropriated for the band's operating expenses, so midshipmen and officers each contributed 25 cents a month to provide new instruments. One of the early Academy superintendents also wanted fancy new dress uniforms for his bandsmen. When he learned there wasn't enough money in the band fund he ordered all the grass on the Academy grounds mowed and sold as hay. The band got new uniforms, complete with gold braid and feathered helmets.

When the Civil War broke out, the Academy was moved to Newport, R. I., and the band went along. At war's end band members were discharged, but, not realizing this ended their obligation, they dutifully returned to Annapolis with the rest of the Academy. There they were rehired as civilians and a new bandmaster was hired, Peter Schoff, a former U. S. cavalry bandmaster.

During Vice Admiral David D. Porter's superintendency, hops were held so frequently at the Academy that would-be comedians of the day from St. John's College tagged it "Porter's Dancing Academy." But VADM Porter probably didn't mind. He enjoyed and

Left: "All dressed up with the necessary paraphernalia and provided with false whiskers, the bandmaster was a fierce-looking fellow." Right: The original Naval Academy Band, 1860.

plays on”

U.S. Naval Academy Band

appreciated humor as well as music, as is shown in an order he issued on 25 Oct 1867:

“Midshipman Thompson (1st Class) who plays so abominably on a fish horn will oblige me by going outside the limits when he wants to practice or he will find himself coming out of the little end of the horn.”

Since every musician was required to play, an outsider, usually the Captain of the Watchmen, was chosen to lead them. He was a fierce-looking fellow when dressed in all the necessary paraphernalia and wearing false whiskers. Women and children screamed at his appearance. These substitutes were, however, less than satisfactory since they didn't know the first thing about music. They often downed their baton and stopped the band in the wrong place at the wrong time, or they marched out of step. Later, sergeants of the Marines took over the job with better results until, in 1919, a real drum major was provided.

Bandmaster Schoff retired and Charles Zimmerman took over in 1887. At age 26, he was, and remains, the youngest leader ever appointed. Despite his youth he quickly gained the respect and admiration of his men because of his exceptional ability and warm personality. During his 29 years as leader of the Naval Academy Band, Professor Zimmerman accumulated so many medals and decorations that a theory circulated among midshipmen that had he fallen overboard in his full dress uniform, the weight of his medals would have caused him to drown instantly.

Although music was available for most occasions at the Naval Academy, the regiment had no song of its own. Zimmerman had written marches for each graduating class, but they were seldom heard outside Annapolis, and the midshipmen began teasing the bandmaster about his marches. In 1906 Zimmerman and Alfred Miles, the midshipmen choir director, collaborated on a new song that would truly be inspiring—one that would live forever. When Zimmerman completed the tune, Miles set the title and wrote two stanzas. Words and music to their “Anchors Aweigh” were completed in November, and the march was first used at the 1906 Army-Navy game. Navy won for the first time after a long series of defeats, and the march gained recognition all over the world. It eventually became known as the Navy's official song.

In 1894 the Marine Corps uniform was prescribed for

academy band...

all Navy musicians. Everyone looked forward to wearing the smart-looking suits, but they soon learned what a lot of work it was to keep the trousers creased and the buttons shined. The Prussian-style helmet was just plain miserable. Four years later the Fleet bandsmen returned to the easily cared-for sailor uniform, and one musician of German origin proclaimed the Fleetwide sentiment, "To hell mit der helmets." Musicians at the Naval Academy, however, continued to wear the Marine uniform until the end of World War I.

By 1919 the band had increased to 74 members in order to remain proportionate to the Brigade of Midshipmen. Over the next decade the Marine, Army, Navy and West Point bands grew further, and the Naval Academy Band strove to be recognized on equal footing. Legislation was introduced and passed by Congress in 1931 which placed the Naval Academy Band on the same basis as the U. S. Navy Band in Washington, D. C. Under the direction of William R. Sima the new Academy band played a weekly nationwide radio broadcast, and in 1939 represented the State of Maryland at the New York World's Fair.

Alexander Cecil Morris assumed the band's leadership in 1946. Among his most notable qualities were an unfailing love of music and a boundless enthusiasm for the Naval Academy. Although his own colorful career ended in 1955, he had three sons who attended the Academy, a daughter who married an Academy graduate and a grandson who is now an Academy plebe.

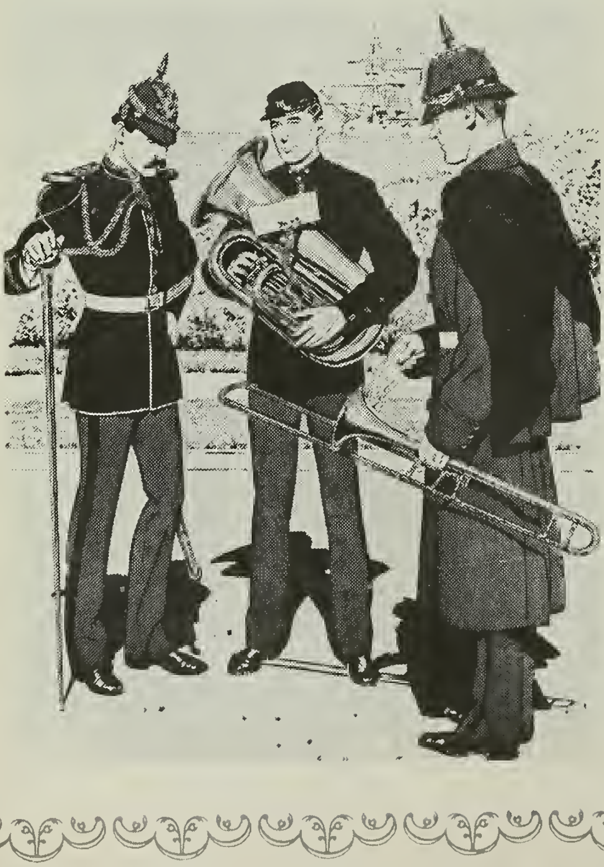
Upon Mr. Morris' retirement, Chief Warrant Officer Max E. Corrick became the leader. During his tenure the band was increased to 85 members, nearly all the instruments and equipment were replaced and the band moved to new facilities in Bancroft Hall.

A long procession of leaders whose names remain bright in the history of Navy music followed CWO Corrick—P. H. Turner, J. S. Surber and D. D. Patterson each led the band through many concerts and evolutions on the Naval Academy grounds before retiring. Lieutenant Commander Ned Muffley, now the leader of the famed U. S. Navy Band, directed the Academy band before turning it over to the present leader, Lieutenant Joseph Phillips, the youngest since Charles Zimmerman.

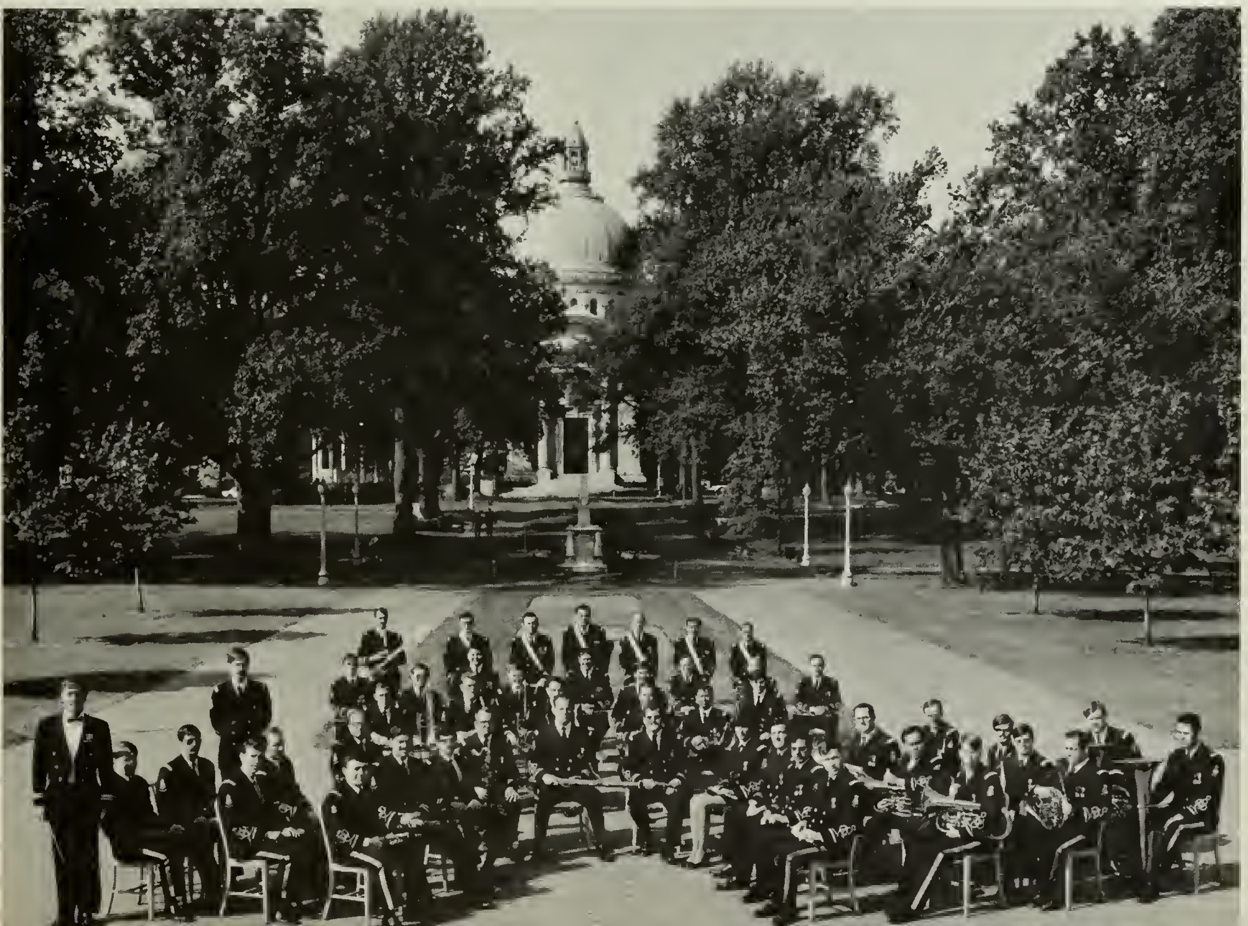
Today's Naval Academy Band is a far cry from the 13 men who reported to Annapolis nearly a century and a quarter ago. Under LT Phillips' leadership it has, in addition to providing musical support for the midshipmen, taken on an entirely new concept in musical programming. Concerts are totally thematic, complete with scripts and narration. Directed at capturing the audience's attention from beginning to end, they have met with an overwhelmingly favorable response from the Annapolis community. Rock groups, jazz ensembles, a woodwind quintet and a country group now complete the band's entertainment package. The addition of women to its ranks has drawn unanimous approval from bandsmen and band patrons alike.

As the Navy's oldest continuing musical organization the Naval Academy Band looks ahead with great anticipation to the future. Present members hope to add their share to the progress which has seen a walrus-moustachioed fifer and drummer grow into one of the top-ranking musical organizations in the country.

—CWO Michael Pesses, USN



Left: Bandsmen uniforms in 1897. Right top: The U. S. Naval Academy Band at the Chapel Walk Bandstand in the 1890s. Right bottom: The Naval Academy Concert Band, 1974.



Advancement and Time In Service Requirements

First, 2nd and 3rd class petty officer candidates participating in the upcoming February advancement examinations are among the first to be affected by the new "time-in-service" extension requirements, but not to the fullest extent.

Recently, DOD announced an all-service alignment of TIS eligibility, requiring that to be eligible for promotion to pay grades E-4, E-5 and E-6, individuals must have TIS totals of two, three and six years, respectively.

However, for the February exams, BuPers is authorizing a general "partial" waiver for those going up for 2nd and 1st class; 3rd class candidates will not be affected until August 1975, when the new TIS requirement becomes effective for all three rate groups.

The waivers will provide advancement opportunity for those E-5/E-6 candidates within three months and nine months, respectively, of the eligibility requirement. In other words, 3rd class petty officers going up for 2nd class are required to have no less than 33 months and 2nd class going up for first class no less than 63 months' total time-in-service. This waiver applies also to those individuals who took the August 1974 exam but were not advanced, making them qualified (if otherwise eligible) to participate in the February examinations for advancement in rating.

For those individuals entering the Navy in advanced grades or through special programs affording early, accelerated advancements, the new TIS longevity rule would necessitate an inordinately long delay to meet eligibility requirements for advancement to grades above E-4. Therefore, a constructive time factor has been initiated to permit these individuals to compete on an equitable basis with their contemporaries who were advanced through the apprenticeship grades. Each candidate entering under such conditions, for example, will be considered to have acquired the combined minimum time (for advancement purposes only) currently required to serve between grades. In other words, a member entering the Navy in pay grade E-5, or being advanced to that grade through accelerated advancement, will be credited with 30 months' time in service on the date of advancement.

The idea behind the TIS requirement is an effort to achieve a more mature leadership posture within the concept of the all-volunteer forces, according to BuPers, and to establish uniformity among pay grade levels in all the services, giving no advantage to any one service. Up until now, advancement to E-4-5-6 was unrestricted by time-in-service requirements.

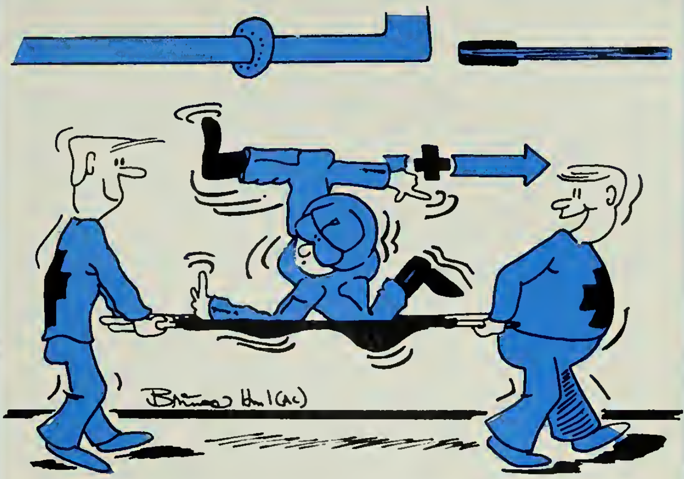
DO YOU HAVE ANY FRIENDS OR RELATIVES INTERESTED IN THE NAVY? YOU CAN HELP THEM GET ALL THE INFORMATION THEY'LL NEED BY GIVING THEM THIS NUMBER TO CALL. IT'S TOLL FREE FROM ANYWHERE IN THE CONTINENTAL U.S.
800-841-8000

on the serious side

YN1 James Nixon

"I knew the new skipper was a seasoned veteran, but not that seasoned."

HM1 George Brines

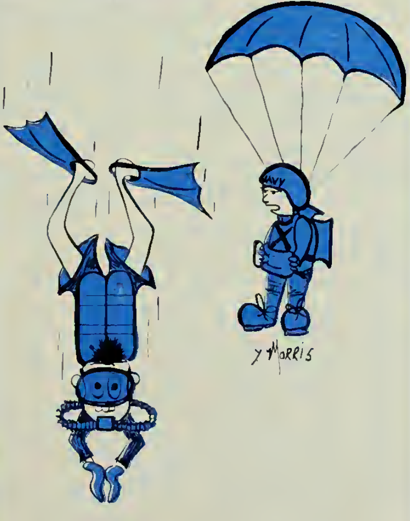


"Wonder what he'd be like if he had completed the entire debriefing?"

ST1 Joe Franklin

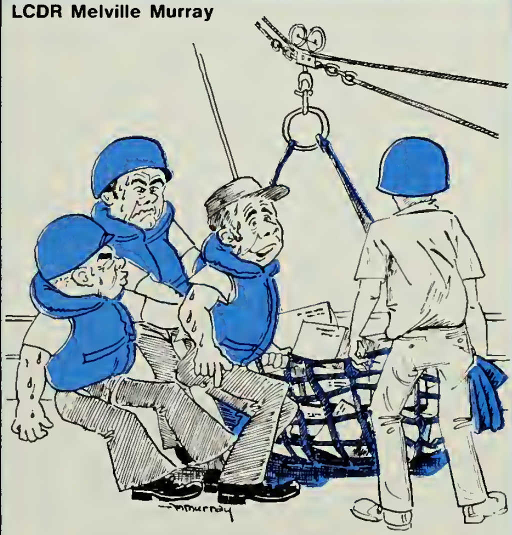
"Uh, Harry, are you sure you picked up the right hat when we left the 'senior-junior' discussion group?"

PRAN Thomas Morris



"Henry, aren't you wearing the wrong rig?"

LCDR Melville Murray



"Hey, chief, how many aerobic points do we get for this?"

TAFFRAIL TALK

It's not every day sailors get involved in a chase for robbers, but Yeoman 3rd Class David L. Chappell, Jr., and Fireman William Staley found themselves doing just that.

Chappell, stationed at CinCLantFlt headquarters, was driving his car one Saturday night last fall on Princess Anne Road in Norfolk with Staley, a Naval Reservist serving onboard the destroyer USS *Harold J. Ellison*. They decided to stop at a market and do some shopping.

As the two drove into the parking lot, they suddenly realized two men were robbing the market. They could see a man holding a shotgun on another—later identified as the store manager—while the other stood guard. The manager was filling a bag with money from the safe.

Looking for a phone to call police, Chappell drove to a house just down the street, explained to the occupant about the robbery, and made the call. Chappell and Staley went back to the vicinity of the store to get some kind of description of the robbers.

At that moment, the two robbers, one still with a shotgun, the other carrying a bag, ran down the street as the sailors watched. One robber got into a car driven by a third man, the other fled on foot across an open field.

The car sped off down a side street and the sailors followed, trying to read the license number. Impossible, they thought—they were doing 50 mph in a residential area. Suddenly, the getaway car stopped at an intersection and waited for an opening in the cross traffic. Chappell and Staley moved in behind them just in time to see the license number and identify the car before it turned and headed for the interstate highway.

Back at the market, the police had responded to the telephone call and were on the scene as Chappell and Staley returned with their information. Minutes later a patrolman, with the information radioed to him, spotted the car and apprehended the two suspects in Great Bridge.

"The man who ran through the field turned himself in the next night," Chappell said.

Chasing robbers is not their Navy responsibility, but Chappell and Staley are two Navymen who have contributed to community service by getting involved.

* * *

Every once in awhile an interesting and noteworthy item slips through our fingers, such as an event that took place on 13 July last year. That's when the attack carrier USS *Coral Sea* (CVA 43) recorded her 250,000th arrested landing.

Making the landing in the ship's C-1A twin-engine COD aircraft during a carrier qualification training period was Lieutenant Paul Marshall, assigned to the ship's V-3 division. At the time, Captain Thomas S. Rogers, Jr., was steaming the ship off the southern coast of California and announced to his crew that "no other operating combat carrier in the fleet has come close to this record."

We checked. And a source in the Naval Air Systems Command informed us that while 250,000 landings are indeed a lot of landings, records are not kept, except perhaps in each ship's log, so there is no way (short of contacting each of the carriers afloat) to substantiate the claim. Therefore, all you carrier crewmen and veterans, can anyone top *Coral Sea*'s claim to fame?

The All Hands Staff

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

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DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for each five naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.

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Right: Framed by the antenna platform, a member of the Surrey Singers from Oklahoma City University, with Navy escort, views USS Wainwright (DLG 28). The USO-sponsored group, while performing at Guantanamo Bay, Cuba, were hosted by Wainwright for lunch and a tour of the ship.

LOOKING FOR A FASTER • EASIER • SAFER • SURE WAY TO SAVE?

BUY U.S. SAVINGS BONDS

ALL HANDS

in this issue:

TRIDENT

FEBRUARY 1975

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ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

FEBRUARY 1975 NUMBER 697

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REAR ADMIRAL WILLIAM THOMPSON, USN
Chief of Information
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FRONT AND BACK COVER: TRIDENT: An artist's conception of the Trident submarine is featured in color, in center of front cover, along with line drawings of early submarines. Lower left, Robert Fulton's Nautilus, 1800; upper right, USS Holland (SS 1), 1900; line drawings on back cover, top to bottom: overhead, interior and profile views of David Bushnell's Turtle, 1776. Front cover art and design concept by Chief Journalist William G. Clark, USN. Line drawings of early submarines, courtesy of National Archives and Naval Photographic Center. Back cover art, showing inventor John P. Holland in conning tower of first submarine purchased by the Navy, is a color adaptation by former Draftsman 2nd Class Kenneth Cassady, USN, of a photo taken around 1900.

Inside front: Silhouette of F-14A Tomcat cockpit and pilot during launching operations aboard USS Enterprise. Photo by PH2 Eric Rosemann.

THE TRIDE

NT STORY

The new *Trident* undersea nuclear weapons system, with its longer-range missiles, larger submarines, and complete U. S. "home ports," will increase combat readiness and cut operating costs of the Navy's FBM force—and it will also make life a lot better for submarine crews.

The *Trident* missile (the entire weapons system, including submarines, missiles, and base, is named "*Trident*") will be capable of reaching enemy targets from both the Atlantic and Pacific Oceans—thus making expensive overseas ports unnecessary for *Trident* submarines.

The new *Trident* submarine together with its missiles will be accommodated at a new complete facility located at the current site of the Bangor Annex, Naval Torpedo Station, Keyport, Wash. The new base, scheduled to become operational along with the *Trident I* missile and the first *Trident* submarine in 1978, will be the first home port for the planned *Trident* fleet. There the *Trident* submariners and the shore-based support personnel will be manning and maintaining the Navy's all new strategic weapon system designed to assure the survivability and reliability of the United States deterrence capability against nuclear war right into the 21st century.

The *Trident* System now under acquisition was decided on only after the Navy had studied over 100 different approaches to improving the capabilities of our FBM force in the face of constant efforts by potential enemies to develop ASW (antisubmarine warfare) systems capable of neutralizing or destroying it. Planning was based on the most recent accomplishments of potential adversaries, such as helicopter-equipped ASW ships, new surface and submarine sonars, and naval air improvements, as well as what could likely be achieved in the foreseeable future.

The capability of counteracting sudden ASW technological breakthroughs by a potential enemy has been provided for by keeping the size of *Trident I,* first in the *Trident* missile series, small enough to fit into our present *Poseidon* subs. *Poseidon* subs armed with *Trident I* missiles could then operate in either the Atlantic or Pacific due to the increased missile range, 4000 nautical miles as opposed to the present 2500. Both the *Poseidon* missiles and *Trident I*'s have MIRV capability.

Trident outward bound—Artist's conception graphically conveys size, power and speed of Trident submarine breaking through water.

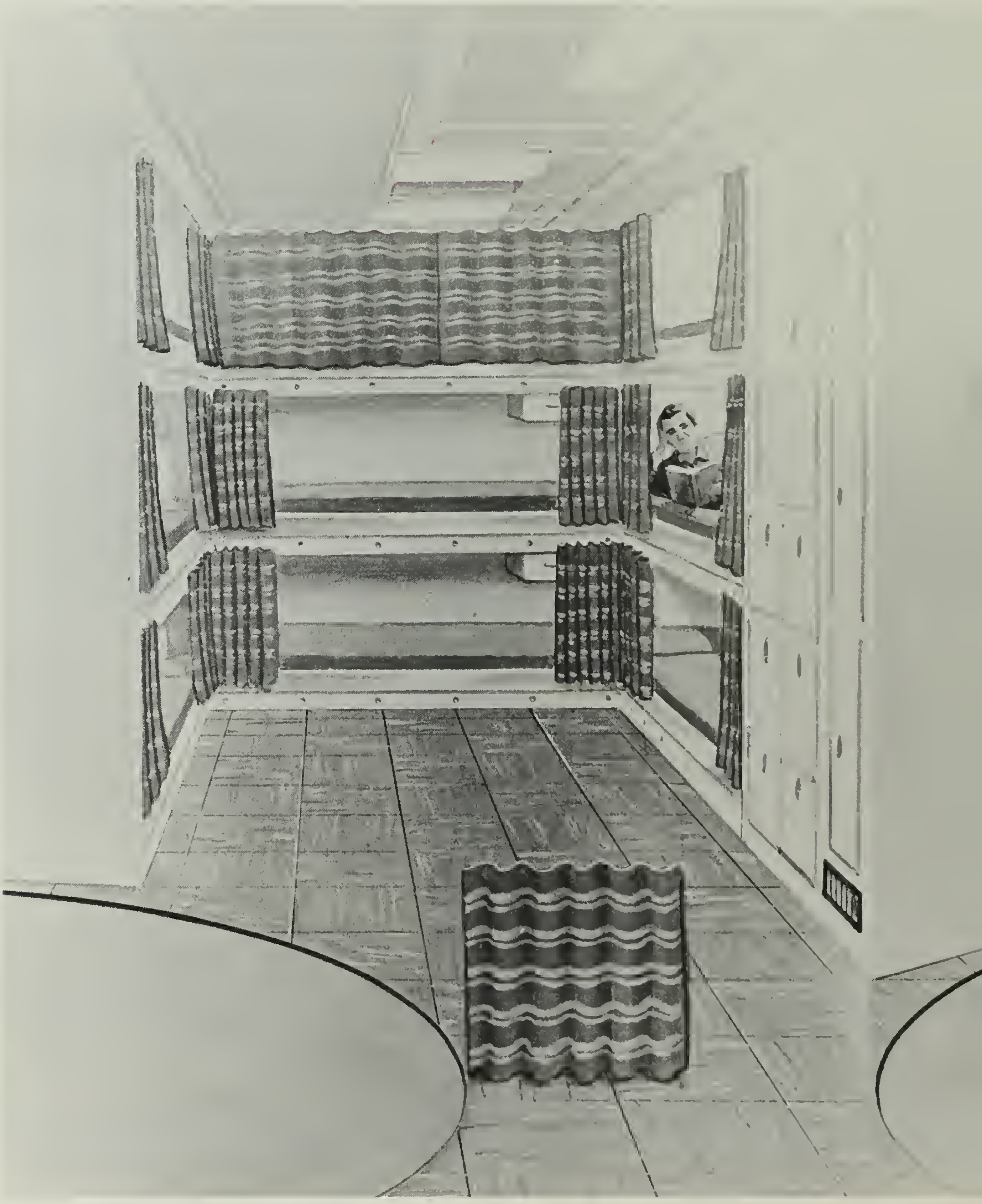
THE TRIDENT STORY

Thus, *Poseidon* submarines would survive as a deterrent and enhance our strategic capabilities.

The increased range would put potential enemy targets within reach from the area of Bangor itself. But the *Trident* subs (or *Trident I*-fitted *Poseidons*) would have over four times the ocean area of present *Polaris/-Poseidons* to hide in while keeping those targets within range.

To make it even tougher on an enemy, the increased range makes it possible to select patrol areas with seasonal storms, a wide variety of ocean-produced sounds, or other phenomena to blunt detection efforts of improved acoustic ASW sensors which potential enemies now have. The *Trident*'s new long-range sonar system, combined with the sub's greater speed, quiet reactor, power plant and other systems, will give increased ability to detect and evade.

Pacific basing will confront potential enemies with the need for a large, expensive two-ocean ASW system, which experts say could not be effective because of lack of bases near the U. S. coast.



The longer range is good news for the taxpayer, who won't have to pay the price for long, expensive supply lines to overseas bases. And because each *Trident* can carry 24 missiles, eight more than *Polaris/Poseidons*, fewer subs will ultimately be needed to keep the number of missiles at sea within agreed-upon international arms limitations.

But the range factor will also allow *Trident* crews more time with their families. The crews will be able to live with their families during refit and advanced training periods, since the Bangor base will include refit capability, missile support, shore-based technicians, and training schools, as well as living quarters and other facilities.

The Navy is expected to build 400 family housing units at Bangor during 1976-77 for married *Trident* crewmen and shore-based support personnel. Bachelor crew members will have permanent shore quarters for "off" periods, along with storage of civilian clothes and other items while at sea.

And the *Trident* sailors will also be more comfortable at sea. The *Trident* sub's size, 560 feet, or 135 feet longer than the largest *Poseidon* submarine, allows space for curtained-off, nine-man bunk areas with a large locker under each individually curtained bunk. Even though crewmen on patrol will wear "*Polaris Pajama*" overalls, there will be hang-up space for the Navy's new dress uniform.

Each *Trident* will also have a full-time crew's lounge, library, study area, and a "gym" with exercise equipment. (Submarine food has always been rated above average and the exercise gear will help sub sailors work off excess calories.) *Polaris/Poseidon* subs also have these facilities, but size limitations work against full-time use of these spaces for such purposes.

The *Polaris-Poseidon* "Blue and Gold Crews" concept will be continued in *Tridents*. When a crew returns from patrol, it will immediately turn the sub over to the other crew and go on a four-day liberty. Then the

Far left: Nine-man rooms with individually curtained beds will have both under-the-bunk and hang-up lockers. The extra space is possible because Trident subs will be 135 feet longer than present SSBNs. Below: Part of the Navy's Trident submarine-launched, long-range missile system takes a ride down the western test range on an Atlas booster rocket from Vandenberg Air Force Base in California. The Trident experimental reentry vehicle atop the Atlas was tested as part of the Trident supplementary flight test program.

"off" crew will return and help the "on" crew with the refit. But the returned crew will stand no watches, working a normal weekday schedule. *Trident* planners say the refit workload will be cut with both crews participating and with more shore-based personnel helping with the on-board work. Having the refit facility at the same site as the training schools allows "off" crew officers and leading POs to plan work closely with base personnel.

Refit periods will be shorter but more productive. The *Trident* submarine was designed for ease of maintenance and operational efficiency. Large hatches will accommodate equipment replacement, and equipment itself is designed to be more accessible. These factors, plus planned replacement programs, will shorten "turnaround" time which, when combined with increased periods between overhauls, will give each ship an increased patrol availability.

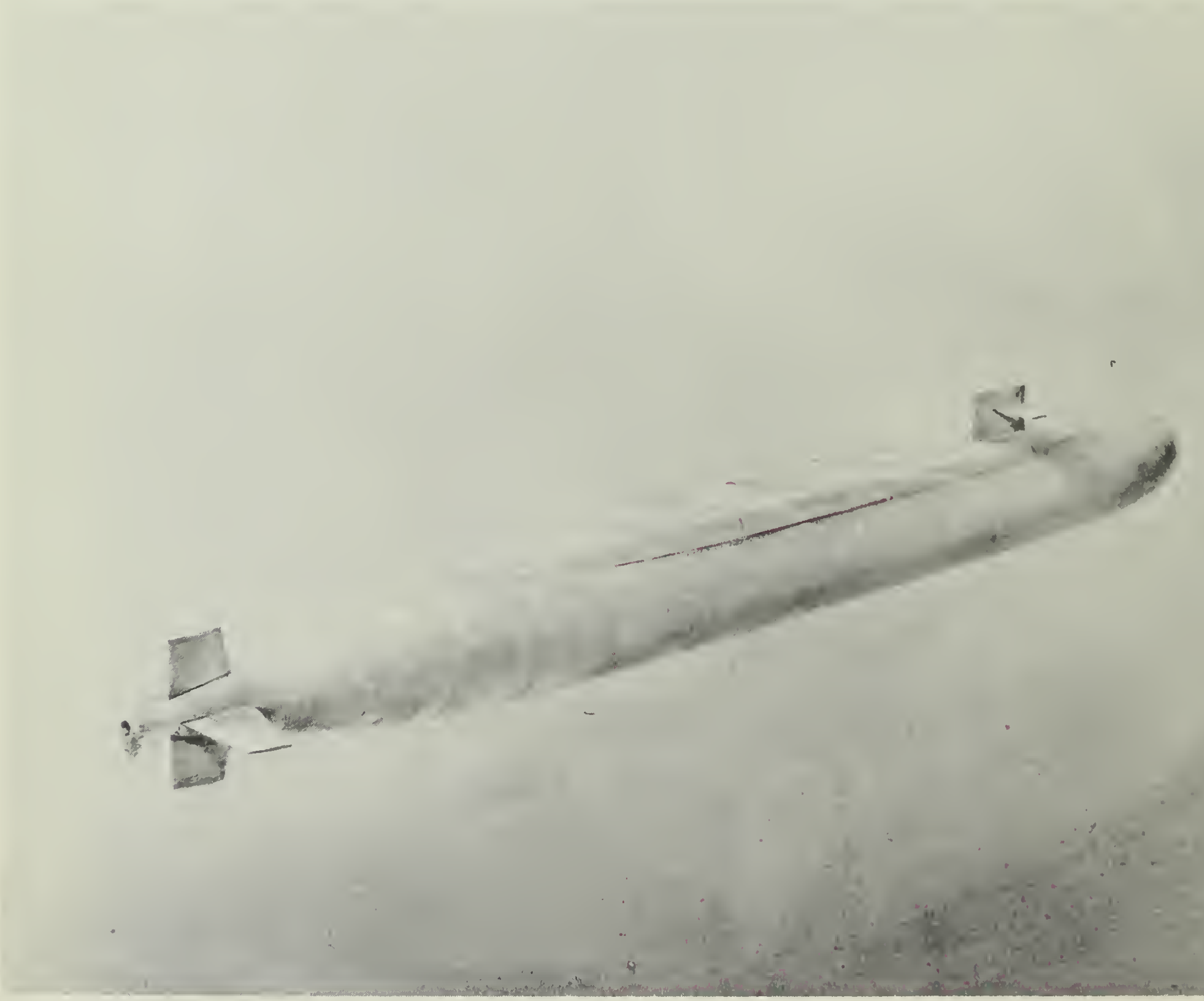
All this, along with the two crews plus a team of participating shore technicians, will eliminate one of the present sub force problems: a very heavy workload for a single crew during refits. After rest and recreation, the "off" crew will then return for a seven-week training period (as present crews do).

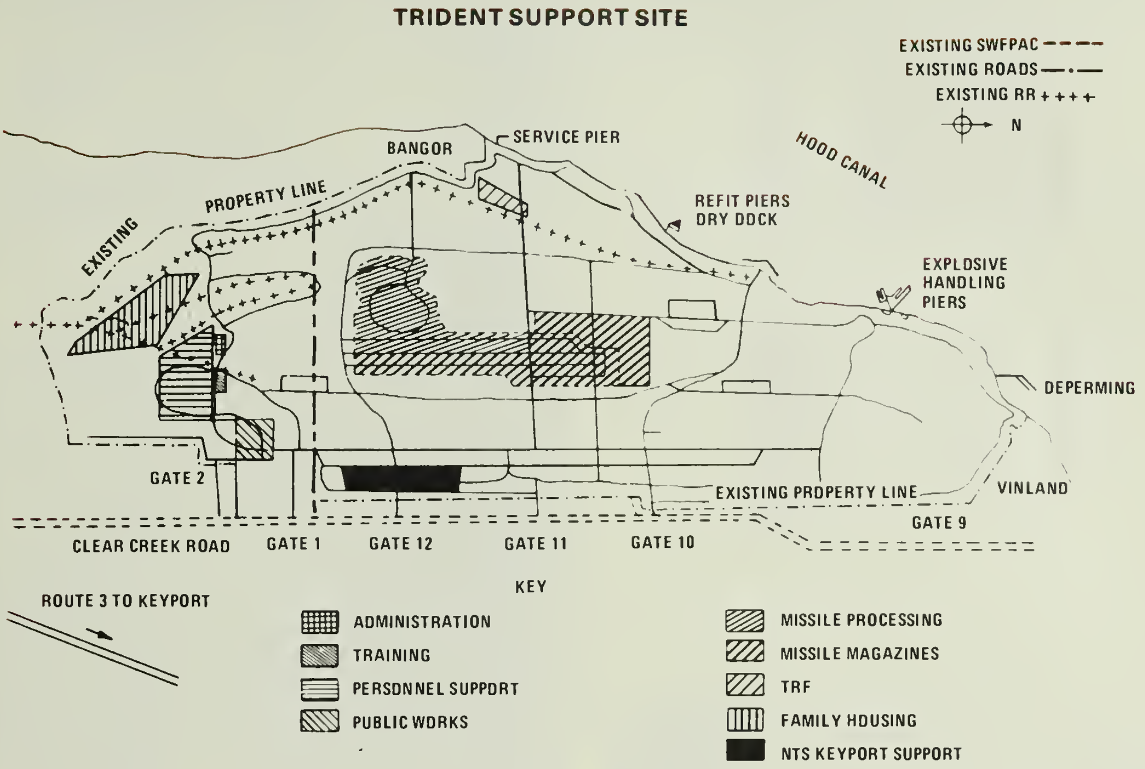
These better living and working conditions will be possible even with *Trident* subs carrying out longer sea patrols than present *Polaris/Poseidon* patrols. *Trident* crews will have longer periods "in" as compared to present crews, adding up to a lot more time off.

Tridents will have only slightly larger crews, 14 officers and 136 enlisted men (*Polaris/Poseidons* have 13 officers, 124 enlisted men) although one officer billet, for a doctor, may be changed to an additional hospital corpsman, one especially trained for such independent duty. No new officer specialties or enlisted ratings will be established. Data systems technicians, now serving aboard surface ships and nuclear attack submarines, will have billets aboard *Tridents*.

General Dynamics' Electric Boat Division is building the lead *Trident* sub at Groton, Conn., while the *Trident I* missile is being manufactured at Lockheed Missile & Space Company's Sunnyvale, Calif., plant.

The first *Trident* crewmen will probably receive





orders during 1976, with many of them, particularly the strategic weapons ratings, MT, FT, ET, being experienced *Polaris/Poseidon* men. Initial training will be at factories. Other crew training will be at the Bangor site for all except nuclear propulsion specialties and service ratings (CS, YN, etc.) who will attend existing schools. All advanced *Trident* training will be at Bangor. Some shore-based personnel will receive orders to Bangor during 1975, and necessary special training required for base personnel will be scheduled for 1976-77.

Navy planners believe *Trident* crews can be trained about 20 per cent faster because new automated shipboard systems provide performance monitoring and fault location programs to simplify corrective maintenance. New visual aids and teaching techniques will cut down training periods through more effective training. Guide charts, called "decision trees," will be provided to check systems by tracing each branch in the diagram to find the source of any trouble, and will enhance the learning of manual "trouble-shooting" techniques. Replacement of a "bad part" located on the decision tree usually will eliminate the problem, keeping the ship or missile system combat-ready.

The present 41 U. S. SSBNs, commissioned between 1959 and 1967, have been on station almost constantly. They were built for 20-year operating periods. The oldest, early *Polaris* types, will reach their 20th anniversaries in 1979 about the time the first *Trident* submarine deploys. *Polaris* subs could thus be phased out as *Tridents* enter the Fleet. *Poseidon* subs, with the extra range of the *Trident I* missile extending their survival chances, may remain part of the FBM force for several years.

—JOC Tom Nugent, USNR

Top: The first Trident "complete home port," 7700 acres at Bangor, Wash., will become operational along with the subs and missiles. Left: The Trident sub, 560 feet long, dwarfs the present *Polaris/Poseidon* types, largest of which is 425 feet. It will carry 24 missiles, eight more than present FBM subs. Shown here is an artist's conception of the Trident submarine.

HOLY LOCH

"Holy Loch: Recent improvements such as the completion (in part) of family housing (with more to come), enlargement of the enlisted club, assignment of a second dentist, establishment of a new medical facility, addition of converted LCM-8 liberty boats, and increased parking facilities have upgraded the quality of life for Navy personnel at Holy Loch. These facts are not widely known."

This report to ALL HANDS sparked the following story on living in Holy Loch. The purpose is to encourage volunteers for duty in that area. It's an important assignment. And it can be a very interesting one for you (and your family, if you have one)—as you can see from the photos on these pages. Here's the story—if you like what you read and see, the Navy in Holy Loch very likely may have a spot for you.

Far left: A bagpiper performs aboard USS Abraham Lincoln (SSBN 602). Left: USS Canopus (AS 34) with USS John C. Calhoun (SSBN 630) alongside, is anchored in the tiny bay at Holy Loch.

A tiny arm of the sea juts inland on Scotland's southwest coast. Wedged in the Great Glen where the northern highlands meet the central lowlands, it is surrounded by rugged mountains, fluted cliffs and a rocky coastline on one hand, and rolling farms, green valleys and quiet lakes on the other. First impression of this bay is one of tranquil, awesome beauty.

On entering the bay, the unsuspecting are startled to see a huge gray ship with several submarines nested alongside. This is Holy Loch—the ship is USS *Canopus* (AS 34), tending units of Submarine Squadron Fourteen.

More than 3600 Navymen and their dependents call Holy Loch home port. Many find their tour in the land of the kilt and bagpipe among the best they've had; others find it less. Holy Loch, like all home ports, has a lot to offer, but in spite of this it will not suit everyone. One thing is certain, though, duty in Holy Loch will be a new experience and an unforgettable adventure.

Complementing Holy Loch's splendid and rugged scenery is its hardy weather. It lies in the same latitude as the southern tip of Sweden, which explains its average annual temperature of 48 degrees. Scotland has a more temperate climate than the U. S.—thus it is colder and there is generally more rain. But as the country lies across the warming Gulf Stream from the South Atlantic, it enjoys long summer days—life in Holy Loch then takes on a hue that invites both the photographer and the explorer.

Over the year there are approximately 80 inches of rainfall, so you can expect days that are damp or cold or both. Yet, there is surprisingly little snowfall, except in the mountains. Extreme seasonal variations are rare in Holy Loch; summers are cool and pleasant, with less rain. You don't have to worry about air-conditioning—even after the warmest of summer days, evening temperatures can drop into the 50s.

Setting up quarters in Holy Loch may be the highlight of a Scottish adventure. Two hundred and fifty rental guarantee housing (RGH) units are now being built at two sites near Dunoon. They are scheduled to be completed during 1975. The latest information available from the office in charge of construction is that the Ardenslate housing is now 60 per cent complete with 82 units occupied; the Sandbank housing is now 13 per cent complete with 15 units occupied.

These multi-unit dwellings at both locations are reported to be comparable to stateside apartments, although you may find them to be slightly smaller. They have two or three bedrooms with many modern conveniences. The kitchens have dual sinks, an electric stove, a refrigerator and hook-ups for a washer and dryer. The floors throughout are tiled, bathrooms are equipped with modern fixtures, several closets are provided to solve most storage problems and central heating has been installed. The average rent, we have been told, is $200 per month. Hopefully, all this housing will be completed by the time you arrive in Holy Loch.

If you can't get RGH (don't count on it) or would rather live elsewhere, you will find living conditions in Scotland are a contrast to what you are used to in the States. Typically, Navy families live in flats, which are smaller than stateside apartments, especially the kitchens. Stowing pots, pans and extra gear can be puzzling until one gets the hang of stuffing and stacking. After one has gotten used to smaller living quarters it can be quite cozy, and will take much less fuel to heat.

Utilities add to the adventure. That very first time you use a toaster at breakfast you should realize that

Above: Town of Kilmun framed with boat boom of USS Proteus. Right: Sailboats at Holy Loch heel to the wind as they pass USS Canopus during a Polaris Sailing Regatta sponsored by the U. S. Navy and the Holy Loch Sailing Club. Facing page: U. S.-owned and -operated Dunoon Armed Services Center YMCA serves U. S. Navy personnel and dependents stationed at Holy Loch.

Scotland "runs" on 220 volts exclusively. You'll need transformers or converters throughout the flat to run your American appliances—except the TV. Britain uses its own transmission signal and nothing you do to an American TV will make it work in Holy Loch. However, you will be able to rent a British TV which costs about $5 per month for a black and white set or approximately $17.50 for a color set. (You save the cost of stateside TV repair bills because you're renting.) A license is not required for radios, but if you have a TV, bought or rented, you must obtain a license from the Post Office. For a B/W set the license is $17.50 per year, and for a color set $30 annually. Anyone without a TV license may be subject to a heavy fine, as much as $125.

Few Scottish flats have central heating; most are warmed by portable electric (or kerosene) heaters. You may find the first few nights in your new flat a bit chilly, but one tends to get used to this.

Flats (and houses, too) in Scotland are normally rented furnished or partially furnished. We've been told that rent for a furnished, two-bedroom flat starts at about $100 per month; one-bedroom starts at about $80 per month. This does not include utilities which are more expensive than stateside. Unfurnished houses are

somewhat difficult to find and often require a minimum two-year lease.

The U. S. Navy's housing referral office at Holy Loch is ready to help.

Most U. S. Navy families live in Dunoon (population about 10,000) which is close to the tender. Some prefer nearby Greenock (77,000) or Gourock (10,000), but both are across the Firth of Clyde and would mean a 20-minute boat ride to and from work each day. Recently converted LCMs will help ease the daily commuting.

A small commissary and exchange are operated by the U. S. Navy in Dunoon, and the U. S. Air Force has larger ones at Prestwick (40 miles from Dunoon), but most families prefer to shop in the local stores. There's only one large supermarket in Dunoon. Daily marketing is quite common throughout the United Kingdom. Each day one goes out and buys potatoes, bread, a bit of meat and a few vegetables for whatever the day's menu calls for. It seems like a chore at first, but this custom becomes quite pleasant once you get into it. Rather than an impersonal task, shopping becomes a daily social event, visiting with friends while shopping at the butcher's, baker's and greengrocer's.

American children in Scotland have the extra adventure of going to school in a new environment. There are no U. S. schools in the Holy Loch area but Americans are welcome to attend the local ones. Not only will they learn their three Rs, but they will also get a unique education in intercultural relations. The Scottish school system is a government proposition, and there are several schools in the Holy Loch area, including one church school. Private schools can be found in neighboring counties but, because of the distance, children are required to board.

High school students can continue in the British system or they can be enrolled in the U. S. Air Force school at High Wycombe in England. They are boarding students yet they are flown home for holidays and vacations. Forms (or grades) in Scotland do not correspond to those of U. S. schools; children are placed according to their age and, above all, ability.

U. S. Navy medical facilities at Holy Loch are somewhat limited, with one dispensary providing adequate outpatient care. Those requiring further treatment or hospitalization are referred to either the tender's facilities or a civilian doctor. Navy dependents may not use the free British National Health Service facilities without permission of a U. S. Navy medical officer.

A new dental clinic has recently been completed at Holy Loch, and a second dentist has been assigned, but dependent dental care is limited to emergency treatment. Civilian dentists are available, but often cannot take new patients. It is therefore recommended that dependents have necessary dental treatment completed before leaving the States.

You may import your car into the country duty-free and tax-free if you execute a certificate indicating you intend to export the car later. Autos must be safe and in good mechanical order, of course, and those over three years old must pass a Ministry of Transport "road

working" test, after which you will receive a certificate.

Service members may use a valid American driver's license in the United Kingdom during their entire tour there, or get a British license for $2.50 which is valid for three years. Dependents may use valid American drivers' licenses in the U. K. for one year after their last entry into the country. If their license expires they may obtain a new one from their home state by mail or get a British driver's license. You must also pay a road use tax of $62.50 per year and obtain local auto insurance—rates vary according to your accident record and the area in which you will be driving. Gas (called petrol) is more expensive than in the U. S., costing about $1.30 per imperial gallon (1 1/5 U. S. gallon) or $1.04 per U. S. gallon. Navy exchange gasoline is available and cheaper, but strictly rationed. This and the narrow, winding roads call for small cars in Scotland.

Recreation around Holy Loch is abundant and good. The Navy operates the usual EM, CPO and O Clubs, along with a bowling alley, movie theater and gymnasium. Special Services has athletic gear, including sailboats, for loan.

The Dunoon Armed Services Center (YMCA) offers movies, recreation rooms, overseas telephone service, organized sports and special group activities such as dancing, dining and tours of the Continent. The Dunoon swimming pool (indoors and heated) and the Cowel golf course are available for Navy families to use at no cost. For the outdoorsman, Scotland is a paradise—fishing in the thousands of lakes (called lochs) and streams is among the best in the world. Local waters are famous for salmon and trout. Cod, haddock, herring and various types of shellfish can be taken along the seacoast.

Hunting is also excellent. However, Britain's strict gun control laws mean you'll probably have to join a rod and gun club. Over two million acres of forests are set aside for deer hunting. Other game includes rabbit and game birds—mainly grouse, blackcock, ptarmigan and waterfowl.

For the sightseer, Scotland offers hiking through its spectacular mountains and forests, and along the rugged cliffs and rocks of the seaside. Don't forget to bring your camera as the landscape is the kind nature photographers dream about.

For those who prefer to hike in the city, duty in Holy Loch offers that too. Thirty miles to the southwest is Scotland's largest city, Glasgow (population about one million). Featured are, among other things, Saint Mungo's Cathedral, dedicated in 1197; the Corinthian-styled Royal Exchange; University of Glasgow; and the Glasgow Art Galleries and Museum, one of Great Britain's finest.

Forty-five miles east of Glasgow is Edinburgh, capital of Scotland. It is often called the "modern Athens" because of its many educational institutions and scientific and literary associations. Among the many things to see in Edinburgh are the Parliament House; ancient Edinburgh Castle; the Palace of Holyroodhouse—a 16th century royal residence; and Edinburgh University. For three weeks in late August and early September, the annual Edinburgh International Festival is held. Established in 1947, it features programs of music, drama, dance, motion pictures and the fine arts.

For all it has to offer, the greatest adventure of living in Holy Loch is meeting the Scots. Most people agree that what their climate lacks in warmth, they make up a thousand times in friendliness. Descendants of the Picts, Celts, Scandinavians and Romans, the Scots divide themselves into Highlanders (who consider themselves of purer Celtic blood) and Lowlanders (who are generally of Teutonic blood). Traditional keystone of Scottish society is the clan—an entire family under one head. Although no longer powerful, many clans still meet annually in the Highland Games, and the clan spirit persists through close family bonds and national pride.

The Scottish way is an easy adjustment you will naturally fall into. It will be a welcome change from the fast pace in the States. That in itself may be the ultimate reward for a tour of duty in Holy Loch.

—JO1 Tom Jansing

Facing page: Glasgow, Scotland's largest city, seen from across the River Clyde. Below: Tourists view city's center from Edinburgh Castle. Bottom: U. S. Navymen on liberty stroll along a street in downtown Edinburgh. Right: The imposing ramparts and buildings of Edinburgh Castle rising above the downtown fountain.

(NOTE: Further information and details about duty and facilities at Holy Loch can be obtained by writing: Officer in Charge, Detachment Holy Loch, U. S. Naval Activities, United Kingdom, FPO New York 09501.)

OVERSEAS HOMEPORTING

Midway

Left: Midway sailors leave the ship for liberty. Above: Pusan, the Republic of Korea's largest port, offers Midway a warm welcome during a recent port call. Photo by PH2 Lloyd Licht. Facing page top: USS Midway during operations off Japan's coast. Photo by AN Eric J. Roseland. Bottom: An American girl joins Japanese friends in a traditional Japanese dance. Photo by PHC D. W. Griffths.

For sailors reporting aboard the attack aircraft carrier USS *Midway*, the old Navy recruiting slogan, "Join the Navy and see the world," has a new twist—". . . and bring the family."

Midway is the first carrier to participate in the Navy's Overseas Family Residency Program (OFRP) and has been operating out of Yokosuka, Japan, since October 1973. Families of married personnel are encouraged to come overseas to avoid long separations. OFRP increases the amount of time a man on sea duty is able to spend with his family and the Navy hopes the program will contribute to increased personnel retention.

The program was initiated to provide the same total of ship days at sea in fulfillment of U. S. defense commitments with reduced Navy force levels. Participating ships operate from an overseas port for two or three years, eliminating lengthy transits to and from the United States.

With *Midway* completing her first year of OFRP, there are indications that the program is proving to be a success. Before coming to Japan, 17.1 per cent of *Midway* first-termers "shipped over," below the Navy

In The Orient

average at that time. Since the move to Japan, there has been nearly a 100 per cent increase, with 33 per cent of those on first enlistment deciding to remain in the Navy.

Career Counselor Chief M. E. Perkins, a veteran of recruiting duty in Michigan, directs the ship's retention program. He says emphatically, "OFRP has had a very positive effect on reenlistments."

The OFRP has proven very popular with the personnel and families of *Midway* and embarked Air Wing Five. Lieutenant (jg) Ronald O. Prestidge, *Midway* Administrative Officer, who has been in Japan with the Navy for 10 years, says, "Some people say Japan is too expensive but I couldn't be happier."

Illustrator Draftsman 2nd Class Maloy R. Bills says, "I'm happy to be able to live overseas with my family. My wife didn't believe she could get by without a car, but now she goes everywhere on the trains."

Commander Peter J. Theodorelos, the assistant air officer, says, "When you move a community of 4000 men plus many of their families you expect some problems to crop up. I think we've had fewer than we expected." The commander says his family shares his enjoyment of living in Japan.

The Yokosuka Naval Base offers a wide variety of services and goods at reasonable prices and provides a touch of home. There are schools, from nursery through high school, providing comparable educational programs to a typical U. S. public school plus all the extracurricular activities—athletics, proms, etc. The high school offers an excellent student-teacher ratio of 16 to one, better than most stateside schools.

Beyond the normal school offerings, high school students at Yokosuka can take up to four years of instruction in the Japanese language and all students enjoy a valuable intercultural experience.

Outside the base, Japan is rich in things to see, places to go and things to do. Within easy traveling distance are Tokyo, Mt. Fuji and numerous other popular sightseeing spots. With excellent train and bus service, getting around in Japan presents few problems.

When families look for off-base housing, they quickly discover that rents and overall living costs in Japan are high and not entirely offset by the extra cost-of-living allowance that is paid. Exchange and commissary privileges are an important help and resourceful people still find some bargains in Japan.

A key to the success of the program is the work of the Dependents' Assistance Team (DAT). Senior Chief Electronics Technician Leroy Borchardt, supervisor of the DAT office, explains, "When some families get

Arm in arm, Aircrew Survival Equipmentman 1st Class Chuck Wood of the carrier Midway, and his wife, Elizabeth, enjoy the natural beauty of Japan. Left: The Woods enjoy shopping at one of the many open-air markets in Japan. Photos by PH2 Lloyd Licht. Facing page top: Mark Janson (left), a machinery repairman 3rd class in Midway's engineering department, and his wife enjoy a meal with Japanese friends. Bottom: Mayumi Griffith learns the fancy footwork involved in hopscotch as her friend Regina Hill provides a watchful eye, ready to offer helpful advice. Photos by AN Keith A. Kuhns.

here, they experience culture shock. They don't know what a yen is; they may never have been outside their home state before. It's our job to help people adjust and get settled in a new environment."

Supplementing the work of the DAT is the Intercultural Relations Office (ICR), created to help American military personnel and their dependents understand the mores and customs of the foreign land where they're stationed. The ICR seminars help the Americans to adjust to a different culture and to get along better in Japan. (See the feature article on cultural shock in this issue.)

As for relations with the Japanese people, a spokesman for the Civil Relations Office, a Japanese citizen, says Yokosuka has a long, proud tradition as a naval port and points out that, despite the increased time ashore by crewmen since the carrier's arrival, mutual understanding has been on the increase while incidents have been on the decrease.

For the unmarried crewmen of *Midway*, extended deployment provides greater opportunities for thoroughly exploring and enjoying Japan. The train system makes travel convenient and inexpensive.

For instance, to Airman Reid L. Gardiner of Fighter Squadron 151, Japan means superb skiing. "The slopes and facilities are outstanding," he says.

Midway's Commanding Officer, Captain Richard J. Schulte, a 25-year Navy veteran, emphasizes OFRP is a program of necessity, but says the ship has reaped some unique benefits.

He cites improved cohesion at all levels within the crew. Because of extended deployment, Schulte says, the ship and air wing have established a level of teamwork that might not be possible under other circumstances.

Another benefit, according to the captain, is that the ship has achieved a familiarity with western Pacific operational waters that it might not gain on a shorter deployment. He is pleased with the frequent operations conducted off northern Japan.

The ship's executive officer, Captain Charles W. Roe, who has served in the Navy since 1953, is equally emphatic about the success of OFRP. Like Captain Schulte, Captain Roe lauds the improved ship-air wing teamwork and explains, "We have a similar relationship with Destroyer Squadron 15, also on extended deployment to the western Pacific and operating from Yokosuka. We are an excellent working team during task group operations. The close ship-air wing-destroyer squadron relationship, enhanced by the OFRP, has made us an extremely effective operating force.

Evidence of the ship's readiness and coordination was provided in July during the annual Refresher Training (REFTRA) period. REFTRA tests all facets of the ship's emergency capabilities, including firefighting, internal communications and damage control procedures. The carrier was awarded exceptionally high marks by the Fleet Training Group observers.

Overseas duty is not right for everyone, of course. Captain Schulte says that while some men just aren't suited to living in a foreign country, the mature, self-motivated individual should find the duty highly rewarding.

Based on *Midway*'s experience, the Overseas Family Residency Program is working well, both for the Navy and the Navy families involved. *Midway* officials consider the problems encountered to be minimal compared to the benefits to operations, training and shipboard and family morale.

HOW TO RECOGNIZE IT--
CULTURAL SHOCK
WHAT CAN BE DONE ABOUT IT

Left: Culture shock can occur when you're stationed for the first time in a strange environment where you cannot read street signs and directions, where there is a language barrier and where customs are new and strange to you. The first step in overcoming culture shock is to learn as much as you can about the country and its people. Shown here: a typical view of "downtown" in Japan. Photo by AN Eric Roseland.

A young sailor leaves boot camp, spends a few days at home, then boards a plane for Japan and the mysterious Orient. What happens when he gets there?

Frequently, cultural shock, says Commander Bruce Goodwin, officer in charge of the Human Resources Management Detachment (HRMD) at the Naval Base at Yokosuka, 40 miles south of Tokyo.

"Cultural shock is what happens when we find ourselves without any of the familiar signs and symbols of our own culture," says the commander. "In our culture, we know how to orient ourselves to the situations of daily life. We know when to shake hands, what to say when we meet people, when and how to give tips, how to make purchases, and when to take statements seriously and when not.

"We know," he continues, "because we recognize the cues, which may be words, gestures or facial expression, and we know the customs which are acquired by all of us as a part of growing up in our culture."

CDR Goodwin cites an example of a situation that might cause cultural shock: riding a Japanese train during rush hour.

"There, our young Navyman is standing on the platform waiting for the train. When it arrives he sees that it is already densely packed and decides to wait for the next one. Just then a pair of husky men push him from behind, squeezing him onto the train. He may think they are being rude and pushy. Actually, it's their job. They're doing him a favor by getting him onto the train."

The commander points out another facet of Japanese life that may seem discourteous to an American: the way salespersons make change in markets and shops. The clerk will count the change to herself, then give it to the customer. In the States, clerks are generally expected to count the change as they give it to the customer. "Here," he said, "it is felt that the customer will already know how much change he should get back. A Japanese would be annoyed if a clerk counted out the change for him."

The Navy in Japan is doing something about cultural shock. CDR Goodwin says that his staff approaches the problem from a practical view, recognizing that the total effort must meet the particular needs of the service people and families they serve. He explains that in order to do this, methods must be both brief and effective, serving as a starter to help people help themselves.

There are about 3000 Navy and Marine families living in the Japanese community in the Yokosuka and Yokohama area; another 2000 live in government quarters. In addition, the U. S. Seventh Fleet ships that call at Yokosuka add a significant number to the American population. All are subject to cultural shock.

Helping these people to help themselves, the Intercultural Relations (ICR) division of the HRMD training department is developing and administering various programs to combat cultural shock. The well-trained group of officers and senior petty officers give area orientation briefings (AOBs) and ICR seminars at Navy installations in Japan, turn out informative booklets and write articles for base newspapers. They have had several weeks of intensive ICR training, some more than 70 hours of Japanese language instruction.

The orientation briefing lasts for about half a day, during which Navy people, Marines and their families hear talk about the base and other aspects of Japan. A lawyer from the Naval Legal Service Office leads off the briefing with a lecture and discussion about Japanese laws and the legal system. Many people attending the AOB don't understand the "Status of Forces Agreement." If a crime is committed by a U.S. citizen, there are cases when the government of Japan has jurisdiction and there are cases when the U.S. has jurisdiction. Sometimes both have jurisdiction, further complicating the problem.

Other briefings are provided by representatives from the base education office, provost marshal's office, and chapel. Rounding out the brief, one of the ICR facilitators (an instructor/group leader) provides general information about Japan, including roads, railroads, history, religion and travel.

For a more comprehensive look at Japan and its culture, ICR offers the three-day seminar. At the beginning of the first day, each person is introduced to the others to break the ice and make people aware of each others' backgrounds. Following the introduction, the group, usually about 20 persons, is divided in half, each half is given an artificial culture and a set of make-believe values, then they visit each others' "countries" in twos and threes as "tourists."

At this point in the seminar, Lieutenant Steve Webb, the HRMD training officer, notes that people often feel disoriented, lost, confused and suspicious, much as many of them had felt upon their arrival in Japan. This exercise, called "cross-cultural simulation," is useful in illustrating that the feeling is merely transitory, and can be dispelled by a little study of the host country.

Next, people are asked to list the perceptions they had of Japan before their arrival.

"Quite often," says LT Webb, "these perceptions were distorted beyond any usefulness. Most people in the seminars had gotten their information about Japan from unreliable sources, even stateside taxi drivers who may or may not have been in Japan for 25 years."

ICR facilitator LT Lane Newman: "Some people thought that everything was cheap. Some thought that everything was expensive. Some thought that Japan was backward technologically. Then there were some who pictured Japan as dirt streets, pagodas, people in kimonos and old men pulling carts."

Probably the most useful part of the seminar is the portion called "maintenance skills," knowledge needed to commute or communicate.

In this part of the seminar, people are taught a few phrases of Japanese, the principles of how to use commercial transportation, and how to use the Japanese telephone system. The next day, the seminar covers another area of communication referred to at HRMD as "nonverbal communication."

"There are 32 positively identified, nonverbal actions in everyday use by the Japanese," CDR Goodwin points out. "Bowing is the most obvious example, but there are some that could be misinterpreted by Americans in Japan. That's one reason why we include a discussion of nonverbal communications in our seminars. The other reason, of course, is to lessen the chance that our Navy people will be misunderstood by the Japanese."

In another part of the seminar a rumor clinic is held. During the clinic people are given the opportunity to observe how factual accounts are distorted through repetition. "Rumors tend to lose a lot of important details with every telling," LT Newman says. "At the same time they get a lot more interesting. We used this part of the seminar to relate to people's own preconceptions of Japan."

After the rumor clinic, people are asked to find counterparts and parallels in the customs and values of the United States and Japan. Then the movie "The Japanese" narrated by the former American ambassador to Japan, Edwin Reischauer, is shown. The movie depicts some of the customs and values of the Japanese people—the ones they've adopted from the West and the many they've retained from their own history.

The last day of the seminar all the material presented during the first two days is reviewed and tied together to present a current picture of Japan and the Japanese. Then everyone gets to try out his newly learned maintenance skills.

To practice these skills, people in the seminar split up into groups of three or four and ride trains, buses, and taxis to nearby areas of interest. "They can go just about any place within a couple of hours' travel from Yokosuka," CDR Goodwin suggests, "as long as they return by the specified time," adding that if anyone gets lost, a telephone number has been provided, but that no one has had to use it yet.

When the participants return, they are encouraged to talk about their adventures and any difficulties they may have had. Those who have had trouble don't seem to be especially disturbed, and most say they would be willing to use public transportation again.

The commander is proud of the ICR seminars. "We would like to devote more time to them, but there are limits. We find, based on the reactions of our satisfied customers, that the three-day sessions are very successful as a result of our practical and flexible approach."

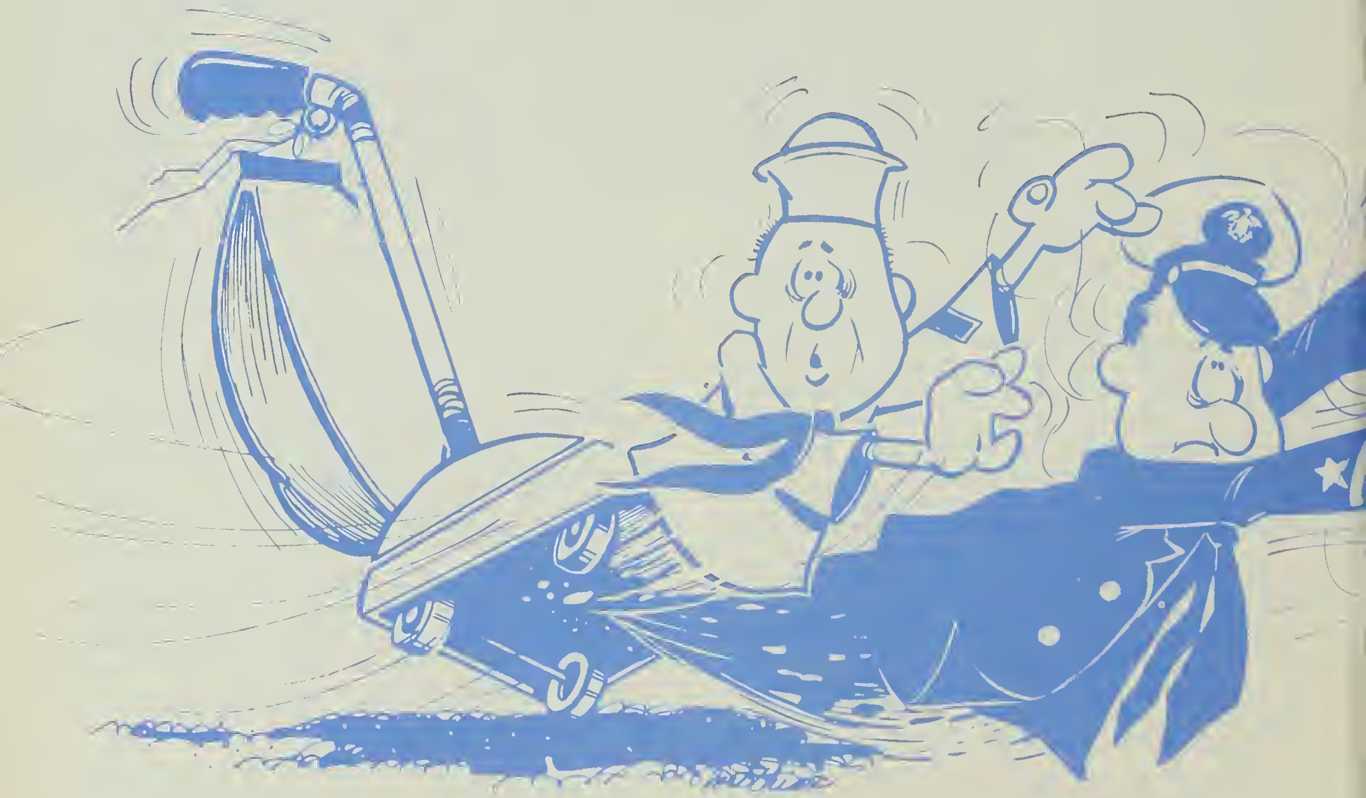
CDR Goodwin stresses that follow-up contact is maintained with those who attend the seminars and orientation briefings. "In this way," he says, "our ICR team builds a relationship with newcomers that doesn't terminate at the end of the seminar or briefing, but becomes a permanent part of a tour of duty."

As the concept of intercultural relations becomes a part of everyday living for Navy men and women serving in Japan, they can better enjoy the experience and equally represent their country and the Navy through mutual understanding.

—JO1 Bob Skinner, USN.

LEADERSHIP MANAGEMENT

"Thousands of senior petty officers and junior officers compose the very important team of middle managers. Middle managers usually have direct or indirect control over about 90 per cent of the functions of a work operation."



FILLING THE VACUUM. . . .

Over the last several years, it has become increasingly apparent that the dynamic, often traumatic, changes which have occurred in our society, our nation, and our Navy have left what might be referred to as a leadership and management vacuum within all levels of our service's chain of command.

Scientific progress over the last decade has brought forth a "quantum jump" in the combat capabilities of our ships, submarines, aircraft, missiles, communications equipment, and computers, but during the same period, our leadership and managerial capacities have simply not kept pace with our rapid technological advances.

Especially critical in the leadership climate of today's Navy are the thousands of senior petty officers and junior officers who compose the very important team of middle managers—in other words, the individuals who do most of the front-line management and who engage in the real nuts and bolts of leadership. It has been conservatively estimated that middle managers usually have direct or indirect control over about 90 per cent of the functions of a work operation. With this sort of impact, if they are ineffective, the overall efficiency of everyone within their vast sphere of influence will be reduced as a result.

Since the late 1960s the military in general, and the Navy in particular, have been placing heavy emphasis on the problems involved with capitalizing on the vast potential of the young nonrated people within our organization. Increasingly, during this period, there has been noted a tendency for the more mature middle management community to say things like "What you're proposing and doing for the younger people is fine, but what about us, the ones who have been around for a number of years and who have worked our way up into supervisory and managerial positions?" Too many times in the past there simply hasn't been an answer to this sort of query which, in essence, is saying, "What have you done for me—the first class, chief or junior officer, lately?"

In response to both the realization that we are, in fact, facing a real leadership vacuum in our middle management ranks and that we haven't done much to rectify this problem, leadership and management training has been established on each coast—at the Naval Amphibious Schools in Coronado, Calif., and Little Creek, Va. At both of these facilities, two new and very worthwhile courses, sponsored by the Chief of Naval Technical Training, are offered:

- Leadership and Management Training for Petty Officers (Course Number A-500-0031) open to personnel in pay grades E-6 through E-9.
- Leadership and Management Training for Officers (Course Number A-7C-0018) open to officers in pay grades W-1 through 0-4.

Both courses are, academically, very challenging and are two weeks in length.

These courses were designed with the realization that times of change, such as the one that the Navy is currently undergoing, are never easy. In different ways, both our young, inexperienced personnel and our more mature middle managers must face the uncertainties of change and the conflicts and misunderstandings which inevitably accompany it. These courses show how, out of this period of rapid change and transition, there must emerge the new operating parameters and the improved managerial and supervisory behaviors which will ensure continued success for our Navy in the challenging years which lie ahead, as we carry out our traditional mission of exerting sea power within a world of competing and often conflicting ideologies.

The mission of the Leadership and Management courses is to provide middle management personnel from all ships, units, commands and facilities, both ashore and afloat, with the most up-to-date and pertinent material to enable them to perform their managerial duties in the most efficient manner. There is emphasis throughout the courses on the time-honored traditions and customs of the Navy, on the principles of good order and discipline, and on the age-old inspirational leadership skills which have proven themselves over the last 200 years.

The courses also show how these time-proven methods can be further enhanced with some of the more recent findings from the behavioral and social sciences to allow us to maximize the use of people, money, and materials with which we have to operate. The courses emphasize how these functions must be performed within the framework of personal dignity and equal opportunity as embodied within the Navy's Human Goals Plan.

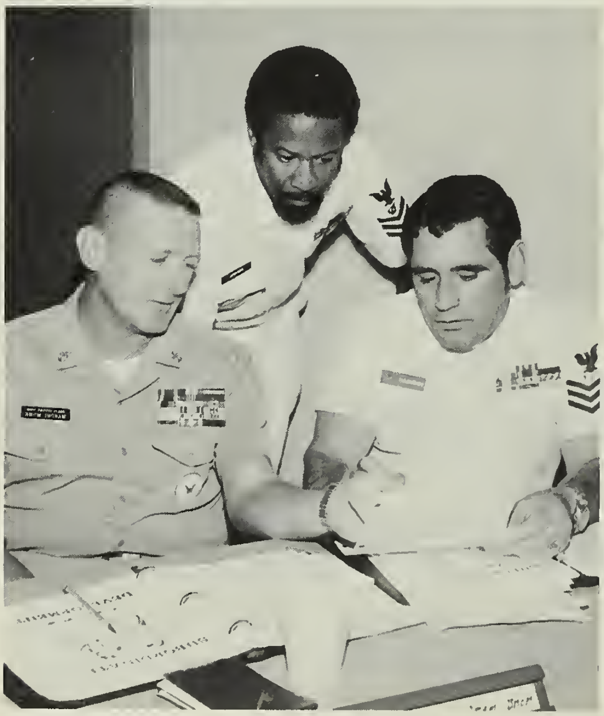
Right from the very inception of these new courses, the people who designed them and took them from rough ideas and dreams to finished products have kept their minds on the practical, everyday needs of personnel in the operational environment. It is one thing to expound a number of theories of how to manage and lead people, but it is quite another to put these theories into operation within the realm of the real world. These courses do exactly this—they continually stress the functional and practical aspects of working with, supervising, and leading people. Further, the courses were designed by and are being taught by personnel who are successful leaders and managers with recent fleet experience and who fully understand the unique problems faced on a daily basis by today's middle manager.

The courses focus on the roles and responsibilities of the manager, on leadership techniques, on motivational methods, on the formal and informal characteristics of organizations and the chain of command, on all types of interpersonal and interorganizational communications, counseling, planning, problem-solving, decision-making, human goals issue areas and programs, and upon self-evaluation and self-improvement.

The design of the courses takes into account the real and significant difference between the art of leadership and the science of management. As taught, leadership is that illusive and hard-to-define charismatic quality found in varying degrees within the spirit of individuals. It is a special spark which is compounded by the personality and is steeped in vision, intuitive behavior, and past experience.

On the other hand, management is more of a data-based discipline—and it is as much a trait of the mind and of the intellect as leadership is a quality of the spirit and the personality. In its simplest terms, management, as taught in these courses, is the accomplishment of the Navy's mission through people. Effective managers are essential to the success of our Navy; dynamic leaders, however, are absolutely indispensable!

In these Leadership and Management courses many important principles are thoroughly explored in a



classroom atmosphere charged with learning potential. It is demonstrated how important it is for the leader to see each managerial challenge through the varying perspectives of his superiors, his peers, and his subordinates. How we must all learn to think in terms of a team effort rather than merely individual action. How we can all contribute to job enrichment and professional satisfaction by the attitude which we demonstrate on a daily basis within the on-the-job environment.

Communications is one of the most important managerial skills, and these courses heavily emphasize improvement in this essential area. The building of tomorrow's leaders while we go about meeting the challenges of facing today's problems is covered in detail in order to maximize productivity and creative endeavor within this organization.

Throughout the course, it is thoroughly stressed how important it is to keep our sights set on high goals so that continual contributions can be made toward the attainment of a more abundant life for each individual within the naval service.

It is no secret that the Navy of today is besieged by a myriad of difficult managerial challenges: Recruiting in the all-volunteer force environment, equality for all, drug and alcohol abuse, retention—our people problems seem to go on and on. It is becoming increasingly apparent that we must ensure that our managers, especially those in the middle grades, know how to maximize their capabilities to ensure that each problem is objectively analyzed; that creative and innovative alternatives are developed; and that action plans are pursued with vigorous enthusiasm.

The Leadership and Management courses offer unique opportunities for middle managers to get away from the busy work atmosphere of their parent commands for a short, two-week period to do some self-assessment; to reflect on some of their own leadership and management problem areas; to make an objective assessment of their own leadership style and managerial limitations; and to exchange valuable and timely information with a highly qualified group of instructors and a highly motivated group of fellow students in a relaxed and learning-oriented classroom atmosphere.

This training might well be some of the most important that is offered in our Navy. It enables a person to sharpen the managerial skills he already possesses and to gain considerable additional insight into the illusive ability to positively influence the life of others while leading them effectively.

The future success of our Navy as a powerful fighting and peace-keeping force rests to a great extent in our abilities to inspire, motivate, and build the growth potential of our people. In essence, therefore, the future of the Navy depends on how well we face up to these challenges. The Leadership and Management courses at the Naval Amphibious Schools at Coronado and Little Creek are important steps in the right direction toward filling our leadership vacuum.

LCDR Dennis Neuman, USN.

(Editor's Note: LCDR Neuman is head of the Leadership and Management Division of the Naval Amphibious Schools Command at Coronado and is credited with having originated the highly received leadership/management courses of which he writes. Commands may arrange for course enrollments—about 30 persons per course, officer and enlisted—by calling the Human Goals Departments of the schools (Little Creek: AV 680-7393/4; Coronado: AV 958-9270) to obtain quotas. It is important to note that these courses are sponsored by the Chief of Naval Technical Training, are open to all Navy commands, ashore and afloat, and are not restricted to the amphibious force simply because of their physical location. Presently, two petty officer and two officer courses are convening twice a month at Little Creek, and one course for petty officers plus a second for officers is being conducted at Coronado.

Far left: Individualized classroom instruction techniques are used throughout the course. Petty Officer 1st Class Johnson (center), an instructor in the course, confers with Master Chief Petty Officer of the Pacific Fleet Ingram and Petty Officer 1st Class Costkow of Helicopter Support Squadron 33. Left: Lieutenant Al Pierce (left), an instructor at the school, enjoys a moment of humor during his officers' class discussion.

A Junior Petty Officer Speaks Out

Let Fred Do It!

Extremely important to any organization, especially a military organization, is responsible and effective leadership. This misunderstood term has lost some of its former impact through misuse, but the subject is no less vital.

Over the years, ALL HANDS *has printed many articles about leadership, but usually the author was one who had exercised authority extensively. Here is an entirely different approach to the subject written by a junior petty officer who views leadership from the start of the ladder.*

Many sailors, disgruntled by their first frustrating attempts to manage others, discover that sewing on a chevron doesn't make a leader. Being a leader is not as easy as saying, "How about you doing this?" Bewildered by their failure, they incorrectly conclude that tyranny and leadership are synonymous.

A tyrant's commands are obeyed only out of fear. A leader, however, positively guides others in such a way that tasks are completed without fear, malice or trampled egos. Unfortunately, too many of today's petty officers have not learned, nor do they care to know, the difference.

Thousands of young people on the brink of a career leave the Navy each year, citing "authoritarian leadership" and job monotony as the two biggest reasons for not reenlisting. Competent, trained people, assets to the service, are lost because 1st and 2nd class petty officers knew how to manage "things," but not how to manage "people." They successfully competed in rating exams and proved they understood the technical aspects of their jobs, yet the added chevron didn't give more insight into people.

Faced with greater responsibilities and equipped with the technical knowledge to do their own jobs—yet unable to lead those who depend on them—these petty officers are partially responsible for perpetuating job monotony. Resorting to authoritarian rule in order to get jobs accomplished is the only weapon at hand for these new "leaders."

Job dissatisfaction is often caused by poor leadership. This, in turn, causes monotony and poor performance among juniors. To a large extent these maladies could be cured by a short course in management, focusing on delegation of authority and human engineering. Not everyone is equipped to be a great leader-manager, but those in positions of authority can do better.

- Delegation is the key to both good and bad leadership. Proper use of this invaluable technique separates tyrants from leaders and successful petty officers from poor ones. To delegate is to trust one's juniors to complete an assigned task within guidelines and without constant supervision. It is the willingness to trust a junior enough to give him the authority to supervise and the support necessary while he, the junior, is training to be a leader.

Although it is true that only authority and never responsibility can be delegated, those chosen to complete a task must feel final responsibility for successful completion lies with themselves. Therefore, a leader imparts not only the authority to do a task, but also the impression that it is the personal responsibility of the man he has designated to ensure the job is done correctly. A trainee, when faced with this challenge, will use every tool at his disposal to ensure success.

Armed with management theories, the petty officer/leader must start at the beginning, his work center. The

work center may be a whole division or just a few strikers, but whatever his scope of authority, he must list the responsibilities for which he will be held accountable. Some responsibilities will be routine; some important enough that an error in judgment or handling could cause serious repercussions; others, improperly handled, would cause little damage. Some tasks within his scope of authority are easily grasped and require little concentration; while some are intricate and require the knowledge of trained personnel.

- Whatever the job to be done, he must be sure he assigns the right man to do it. Manhours are wasted and tempers flare when strikers' qualifications are not matched to job requirements. A striker assigned to a task not commensurate with his ability may feel a sense of helplessness, anger, uselessness or total dissatisfaction. When the challenge is too great or too small, the result is monotony and frustration, hampering the Navy's mission—and it is often the manager's fault.

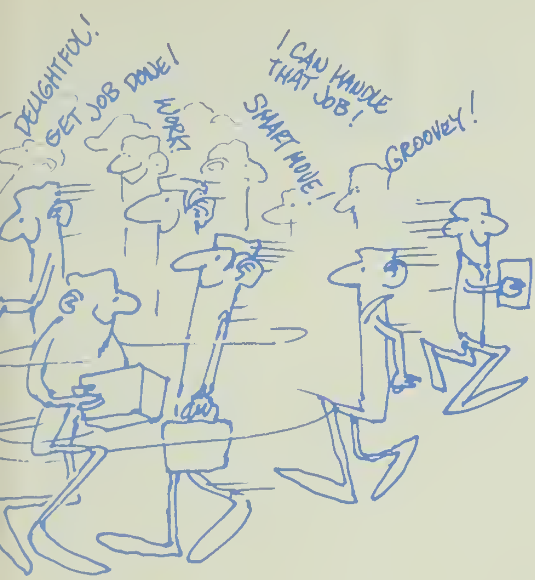
- A leader must permit his strikers to grow professionally. He must challenge them daily with new responsibilities and opportunities to improve their individual talents. A leader, in effect, must train his people to take his place. The efficiency of operation is not gauged by how well a work center operates when the leading petty officer is there, but by how it operates without him. An effective petty officer can leave his work center for hours, or even days if necessary, and the work goes on uninterrupted. The efficiency of operation without him is reflective of his ability to lead and train. But how does one mold such an operation?

BUSY!
COMPLETED!
WORK!
FINISHED!
LET ME HELP YOU!
GOOD STUFF!
GREA

WOMP!
WOMP!
SMACK!
THUMP!

First, each member of the work center must be trained in every level of operation commensurate with his ability to learn. Each individual must understand why his particular job is not a routine "time-waster," but an integral part of the center's over-all mission. When a striker can see why his job, a job he is capable of doing, is important, dissatisfaction is cured and job monotony is a thing of the past.

During the course of his tour, a striker should be assigned every task required of his rate and rating to enable him to become thoroughly proficient in his job. In addition, he should receive training in the next higher rate by being assigned to work with, and not just for, seniors. As each striker learns his rating, he should in turn be assigned to teach those junior to him. By delegating authority in this manner, the leader trains his strikers to become technicians and technicians to become leaders. Eventually, every man or woman should


DELIGHTFUL!
GET JOB DONE!
WORK!
I CAN HANDLE THAT JOB!
SMART MOVE!
GROOVEY!

be trained to the degree that he could competently take charge if necessary.

- It is not enough just to assign tasks. A leader-manager is not dealing with resources, things or inventory; he is dealing with people. Consequently, he must practice human engineering to be effective. Human engineering involves diplomacy, tact, trust and a sincere concern for individual sensitivities as well as a desire to complete a task. It involves some simple techniques that, if used, increase efficiency and raise morale.
- The petty officer should present every job as if it were a challenge, as a necessary part of the overall plan, not as if it were a bothersome task. (If the job is unnecessary, why assign it at all?) Choose the best man for the job and say something to the effect of, "Fred, this is an important job, one that has to be done. I believe you can handle it. What do you think?" If the petty officer has done his job, Fred will be able to handle the task.
- "Make me feel important—boost my ego and I'll do my very best for you" is written on an imaginary sign pasted to everyone's chest. The good leader-manager recognizes this basic need and does his best to fulfill it. "Fred, we've been doing this job the same old way for months, but I think there may be a better way of doing it. You know the job as well as anyone and better than most. How do you think it ought to be handled?"

Fred will tell him how it ought to be done and then will do his best to prove he was right in his assessment. He'll do his best because his ego is at stake, but more significantly, because he feels important. Someone thought his ideas were important enough to ask for them.

- After a good manager has given an order, he tests for understanding. "Did I make myself clear on that point, Fred? Is there anything I failed to explain adequately?" The petty officer places the burden of responsibility for clear instructions on himself. He doesn't ask, "Do you understand" which tends automatically to solicit a positive response.

The good leader is a people builder. He delegates tasks and challenges his trainees to complete them competently. He gives the support needed to complete tasks. He trains men and women to be better than they were.

Neither his praise nor his criticism is taken lightly because he never praises insincerely or criticises unjustly. And he never passes the buck. He stands behind his men and sets them straight in private. He never condemns them in front of their peers.

It's not easy to be an effective petty officer. It requires a thorough knowledge of the job. Organization and planning are essential. Tact and human engineering must never be forgotten. It's not easy to manage "people," but it's more rewarding than managing "things."

—Petty Officer 2nd Class Dan Wheeler, USN

HARD WORKER!
VIBRATING!
NIFTY!
HOPE I'M NEXT!
GREAT!
EXCELLENT!
NICE AWARD!
GOOD SHOW!
LIKABLE CHAP!
NEAT!
GREAT WORK!
TOP JOB
NEAT!
DESERVING!
GREAT!
BEST AWARD FOR JOB PERFORMANCE

How to Mail a Letter

Save Money for Yourself ▪ Conserve

Official Navy mail is not sent free, nor is the personal mail of Navy members flown to or from overseas sent without charge to the Navy. That may come as a surprise to many. Getting Navy mail, official and personal, from one place to another is a very expensive proposition—a $76 million expense last fiscal year, according to Commander G. F. Laughlin, Jr., head of the Naval Postal Affairs Branch (NPAB).

"The military is being charged for mailing expenses by the U. S. Postal Service the same as any company," said CDR Laughlin. Postal costs to the Navy take two forms: indicia and transportation.

- *Indicia costs* are those reimbursements the Navy makes to the U. S. Postal Service for official Navy mail it processes and transports within CONUS. Each quarter, Navy mail is sampled at 492 places to determine its volume. The indicia charge is based on these samples and paid by the Navy Comptroller.
- The second cost is for transporting Navy official and personal mail to and from overseas areas. Civil Aeronautics Board regulations require that overseas priority mail, space available mail (SAM), parcel airlift law mail (PAL) and military overseas mail (MOM) be sent by commercial flights. MAC aircraft may be used only if there is no room on commercial flights or they do not serve a particular area to which mail must be sent. Transportation costs are paid by the Naval Supply Systems Command.

Rising prices have increased both these costs tremendously. "The Navy's indicia mail bill has gone from $16 million per year in 1971 to $37 million today," said CDR Laughlin, "and overseas transportation costs have risen to about $35.5 million per year. These increases directly affect Fleet readiness and habitability since the same funds provide support for all these costs. The increase in indicia mail costs alone might completely fund overhauls for two DDGs."

Another problem is the way official mail is handled. "Navy people need to change their habits," said CDR Laughlin. "All too often mail is sent by methods which are more expensive than necessary." In an effort to reduce these costs the NPAB studied Navy mailing habits and found a number of solutions. OpNav Notice 2700 of 18 Sep 1974 reflects their findings and the resulting new Navy postal regulations.

NPAB discovered that in many cases Navy periodicals and directives were being mailed first class when they could have qualified for lower classes or bulk rates. This was changed.

Money for the Navy

They also discovered that too many official letters were being sent as registered, certified or special delivery mail when they needn't have been. Each has advantages, of course—registered mail provides a chain of receipts and special handling from the post office to the addressee; certified mail provides a receipt of delivery (which an enclosed post card could do just as well and more cheaply); and special delivery offers preferential handling at the delivering post office—but each is more costly than regular first class mail which, in most cases, is just as suitable. Regulations now limit the use of certified and registered mail, for the most part, to the sending of classified material, or where it is required by law. Special delivery, which has limited value to the Navy, is not now authorized in any case.

Insured mail was also studied, and NPAB found that it was costing the Navy 10 times more in premiums than was being recovered in claims. Insured mail is, therefore, no longer authorized for official mail.

Perhaps the most costly postal expense was air mail. Since October 1973 all first class mail being sent more than 600 miles beyond its point of origin has been shipped by air, whether it has an air mail or first class stamp. The extra three-cent air postage gains little special handling or delivery privileges for the letter, and has no other advantage over first class. Letters being sent less than 600 miles will be delivered more quickly by surface transportation anyway, and sending them air mail is a waste of money. Consequently, air mail for most official mail is now prohibited. Exceptions are letters weighing less than nine ounces going to a foreign address (retired checks to those residing overseas, for example) and letters mailed under the Foreign Military Sales (FMS) Program, where the contracting government pays the postal costs.

Another mailing expense found by NPAB was the way people package their mail. Parcels should, of course, be kept small and light and sent the cheapest possible way. Letters should be folded twice and mailed first class (for 10 cents) in a standard letter-sized envelope. According to CDR Laughlin, "that same first class letter sent unfolded in a large, flat envelope will cost 30 cents. That 20-cent difference times many thousands will equal a lot of money saved for the Navy. A bonus

Facing page: A helo delivers mail to a destroyer escort on patrol. Right: Tons of mail arrive daily to be unloaded and sorted before sent to final destination. Photos by JOCS Whitehead.

is that the smaller envelope can be processed by machine and will reach its destination faster than the large envelope which must be processed by hand."

Navy members can also save money on their personal mail, according to CDR Laughlin. Don't use air mail, even for letters going overseas via FPOs or coming to the States from overseas. They will still be flown, but the Navy pays to transport them to and from CONUS (and air mail is the most costly transportation mode); the postage you pay covers only the portion of the journey within the States.

When sending packages to FPOs, or home from overseas, ask your postal clerk to send them SAM or PAL. You will save about ⅓ over regular air mail postage but still be assured they go by air.

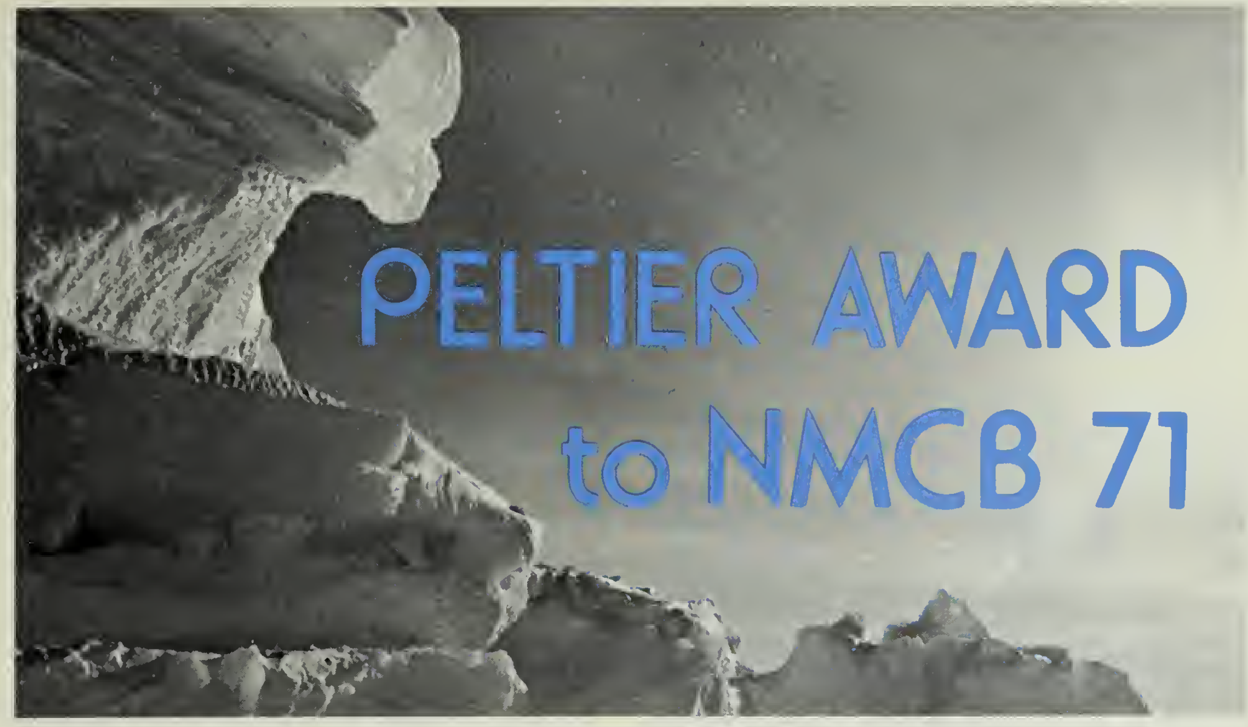
SAM guarantees by law that packages sent by parcel post will be flown space available overseas to or from CONUS. If the package isn't marked SAM it may be sent by surface, which takes at least 30 days from Europe, and longer from Asia. Once in the States, SAM packages are transported by regular parcel post to their destination.

PAL guarantees that your packages will be sent by air from overseas as well as in the domestic system if you pay one dollar extra for it.

In an era of high prices and tight budgets, every penny counts—especially when they add up to millions of dollars each year. By using the mails properly, and within set Navy guidelines, each of us can do a bit to save money for the Navy and ourselves.

—JO1 Tom Jansing

Above: Postal Clerk 3rd Danny G. Ausmus sorts mail. Photo by PH1 D. Grantham. Below: Mail coming in.



PELTIER AWARD to NMCB 71

Naval Mobile Construction Battalion 71 is the winner of this year's Peltier Award, having been selected the Navy's best construction battalion for FY 74 by the Society of American Military Engineers. NMCB 71 was unanimously chosen after comparative analysis of all the units nominated. Some factors considered were deployment locations, construction accomplishments, complexity of operations and safety records.

The Peltier Award, named for Rear Admiral Eugene J. Peltier, CEC, USN, is presented annually to the unit of the Navy Civil Engineering Corps judged to be the most outstanding during a fiscal year. RADM Peltier is a former Chief of the Bureau of Yards and Docks (now the Naval Facilities Engineering Command) and a past president of the Society of American Military Engineers.

For almost five months NMCB 71 engaged in a difficult and challenging construction effort while deployed to the Antarctic Continent in support of Operation Deep Freeze 1974 and the United States Antarctic Research Program.

While the major deployment effort of the battalion was located at the South Pole where a new station was being built, it also completed a power plant addition at McMurdo Station, some 852 miles away. Principal features of the new South Pole station are its 52-foot-high geodesic dome, which NMCB 71 constructed without benefit of a crane; a weather balloon launch station and an observation tower for monitoring auroral phenomena.

The difficulties encountered by the Seabees in constructing these facilities were monumental. They worked in temperatures reaching 45 degrees below zero and at equivalent altitudes up to nearly two miles. Additionally, logistics at the South Pole were difficult, dependent completely on ski-equipped C-130 aircraft to fly in supplies and equipment. Despite these harsh and arduous conditions NMCB 71 completed not only the construction scheduled for FY 74, but also 98 per cent of that planned for FY 75.

The citation accompanying the Peltier Award reads: ". . . The officers and men of NMCB 71 have greatly enhanced the image of the Seabees in the most remote corner of this earth and they can be justifiably proud of their achievements. Their performance has been of the highest caliber in every respect and they are considered most worthy of recognition as the Navy's best Naval Mobile Construction Battalion during Fiscal Year 1974."

In other construction-related awards, Headquarters, Naval District Washington, won the Navy's Bronze Hammer Special Award for improving personnel facilities ashore.

The awards are made to any Navy organization, tenant activity, community group, fleet unit, etc., which does not have primary responsibility for real property management of personnel support facilities, but cooperates with a host activity in making a significant contribution to the improvement of habitability ashore through self-help.

As part of the Self-Help Program, Navymen assigned to NDW Headquarters converted a 73-year-old building into a chapel with the help of Reserve Naval Mobile Construction Battalion 23. Originally, the building was a pneumatic plant for the forge shop of the old U. S. Naval Gun Factory. Since 1962, when the Gun Factory closed, the building has been used for paint storage. Its conversion to a chapel will provide some 13,000 Washington area Navy personnel a place for religious services.

A SALUTE TO QMC DAVID C. CLARK -

FOUR DECADES OF

DURING NAVY'S

David Clyde Clark, a man of medium build with gray hair, sat on the end of the davenport in the living room of his Terre Haute, Ind., home spinning sea stories. His eyes smiled as he talked of his life, love and family—meaning in this case the United States Navy.

For 44 years Clark was a quartermaster in the U. S. Navy. In 1950 he retired from active duty as a chief petty officer, a rate he made in 1914. The man knows and loves the sea service. The concept of "going Navy" began for him in the early 1900s with an enthusiastic urge to enlist.

"I had tried to enlist several times, even once during the Spanish-American War, but each time I tried they told me I was either too young or too skinny. Finally, on August 13, 1906, I enlisted," he said as he thumbed through some old photographs.

A man with four and one-half decades of active duty can compile quite a list of duty stations. For example, Clark recalled he has served aboard practically every type of combatant ship in commission up to his retirement—"except for an aircraft carrier." He's been around the world several times; he's been in ". . . most every port in navigable waters;" he's served two tours of duty in recruiting; he's been an instructor for midshipmen and for recruits; and he was an investigator in the legal department of Headquarters, 11th Naval District, San Diego.

After he began his naval career with a swearing-in ceremony in Indianapolis, Clark left for boot camp in Norfolk, Va. From there he went aboard his first ship.

EYEWITNESS TO PROUD TRADITION

200th BIRTHDAY YEAR

The next year, 1907, when Secretary of the Navy Victor H. Metcalf dispatched the Great White Fleet on its famous world cruise, Clark was there. With him on that historic voyage was a young midshipman named Chester W. Nimitz. A portrait of Clark's shipmate, ADM Nimitz, now graces his hi-fi. Next to it rests another portrait, this one an autographed photo of Rear Admiral James E. VanZandt.

"I was recruiting in Altoona, Pa., at the time," Clark said, "when I met a young man who worked for the Pennsylvania Railroad and who wanted to join the Navy. His name was James VanZandt. He asked me what the best rate to go into might be, so I told him to strike for quartermaster."

Not only did James E. VanZandt go on to become a rear admiral in the Navy, but he also served several terms in the Congress of the United States as representative from Pennsylvania.

Going through the pile of photos on the table before him, he pulled out a photograph yellowed with age, showing 21 stalwart sailors on the steps of the Indianapolis post office where a Navy recruiting station was located after the turn of the century.

"I was a recruiter in Indianapolis from 1911 until 1913," he said. "It was a good experience.

"The thing I enjoyed most in recruiting was talking to the parents of the young men. I felt it was important to talk to them directly; after all, they were the people who pointed their boys in our direction. They were the people concerned with the well-being of the boys.

"I would go to a boy's home and explain to him and his folks the opportunities the Navy had to offer. Things like good pay, $17.60 a month (a recruit today makes $334.10 a month); free medical attention; 13 days' leave a year; liberty and travel. These were the types of things the parents looked for."

Later, as a Navy recruiter in Pittsburgh, Pa., Clark wrote an article which appeared in one of the local newspapers, "sometime between 1914 and 1917," he says. It described what the Navy had to offer the youth of a few generations ago. If you want to make a comparison between the Navy of today and that of six decades ago, check Chief Clark's comments.

Facing page: Retired Chief Quartermaster David C. Clark, USN at age 86. Photo by JOC J. Burlage. Center: Young David Clark made world tour with the Great White Fleet. Left: Ensign Chester W. Nimitz who, as a midshipman, also sailed with the White Fleet.

'The Navy of 1914'

"In many ways the life of the sailor of today (1914) is far superior to that of the sailor at the beginning of this century and before. Today we have schools, and the advantages they offer, never dreamed of before; we have travel, with its broadening change of scenery; and our enlisted men today are of such inherent qualities that they have inconceivably raised the status of the service. A ship today is one great piece of machinery, every part of it working with every other part, and our men are given a trade instead of a mere job. Traveling, as they do, to every part of the navigable world, enlisted men have an opportunity, afforded by no other service, of learning the traits of the various nationalities, their industries, and their languages, all of which broaden the men, and open up new possibilities to them.

"The seaman's life is not one of continuously scrubbing the deck. On board every ship Navymen enjoy boxing, swimming, running, boat racing; they have their baseball, football, and basketball teams; in short, Uncle Sam realizes that 'all work and no play makes Jack a dull boy,' and he gives man jacks every opportunity to enjoy themselves in ways which will benefit them.

"Every man who enters the Navy today, does so with some trade or calling. The pay ranges from $17.60 to $100 per month, and advancement is rapid for those who make use of their opportunities. Salaries are paid twice a month, and every cent is clear. The sailor is privileged to bank in a ship's bank of 4 per cent, or in any bank anywhere in the United States. The man who does not have a neat bank account when he leaves the service has no one to blame but himself.

"Medical attention is free, and pay goes on whether sick or well. Thirteen days' leave of absence, with pay, are granted every year, and after sixteen, twenty or thirty years of service, the sailor may go into the reserves. If he leaves active service at the end of sixteen years, he receives one-third his pay, which at that time will amount to about $48 per month. If he leaves after twenty years' service, he receives one-half pay at about $70 per month; and if he retires after thirty years' service, he receives three-quarters pay, plus $15.75 for light and fuel, which will net more than $100 per month. Now show me a firm in civil life which will look after its employees as well as Uncle Sam does. There are none."

Clark's 44 years of active service meant, of course, that he was on active duty during both world wars. During World War I he served aboard USS *Mount Vernon.* Later in that conflict, he became an instructor for midshipmen at the officers' training school at Harvard University, where he taught navigation courses to the fledgling midshipmen.

In World War II, he was assigned duty as an instructor at the Naval Training Center, San Diego, where he indoctrinated new recruits. He later served in the 11th Naval District Headquarters' legal department.

Nearly a quarter of a century has passed since he retired, but he keeps up with the navy's many changes by reading Navy-oriented periodicals. He also enjoys talking to Navy people.

Clark reached for another photograph, this one a snapshot of himself in uniform along with a young sailor. He explained that it had been taken some months ago. "He asked me to be his best man at his wedding," the chief remarked, "but I had to turn down the offer."

The young man was one of many he has "recruited" since his retirement from active duty. Even at 86, Chief Clark is still recruiting for the sea service. He does this by explaining the Navy to young people just as he did many decades ago, before he refers them to the Terre Haute recruiting station.

David Clyde Clark leaned forward on the cushioned davenport, his expression now serious. "You know something—I'll never retire," he said.

No one who ever listened to this old salt will ever doubt it. The Navy is still his life, love and family.

—JO3 David W. Swank

Facing page: Chief Clark, (indicated by arrow) then first class, with the crew from the Indianapolis Recruiting Office in 1911. Above: The Indianapolis Recruiting Office in 1912. Right: (left to right) Chief Clark's 44 years of service span from the sailor of the early 1900s, through the era of the World War I sailor, to the modern sailor of the mid-twentieth century. The figures shown here are portrayed in Navy recruiting posters.

The Navy Coxswain who Returned With MacArthur

When General Douglas MacArthur made his historic return to the Philippines, many people believed he staged the wading ashore to fulfill his promise, "I shall return."

Truth is, while his "wading ashore" did add emphasis to the World War II event, walking calf-high in surf was not in the general's extensive plan—not according to Paul Barnett, coxswain of LCVP 13, who was responsible for delivering the commander-in-chief of Allied forces in the southwest Pacific and his staff to Leyte that 20th day of October 1944.

"I couldn't get the general and the (Philippines) president ashore on dry land as we'd hoped . . . they had to wade in . . . the general said he didn't mind . . . he didn't even bother to roll up his trousers."

That's how Barnett, 53, now living in a St. Louis, Mo., suburb, remembers that historic day more than 30 years ago.

Barnett says he had learned of the impending landing three days before when he was told his craft would take the general ashore. LCVP 13 was one of 25 landing craft assigned to the attack transport USS *John Land* (AP 167) which was about four miles from the cruiser USS *Nashville* (CL 43), carrying MacArthur.

It was about 1300 when Barnett and his crew and the general, and President Sergio Osmena and their staffs set out for the beach. They were part of the third invasion wave of an assault force scheduled to land on that section of the island. During the five-mile ride, GEN MacArthur observed aerial dogfights between American and Japanese fighters and discussed strategy plans with President Osmena.

There is much to remember about that day, but Barnett recalls vividly how the general's uniform trousers were crisply creased and neat before he stepped into the surf to wade the 50 feet to shore. There he was met by several Filipinos who appeared along the beach.

Stepping up to a microphone of a portable radio, MacArthur said, "This is the voice of Freedom—General MacArthur speaking. People of the Philippines—I have returned." Two years before, in the face of overwhelming Japanese forces, the general had reluctantly left the islands, vowing then, "I shall return."

Fighting continued to rage overhead while Navyman Barnett kept guard on his landing craft and the general and his staff conferred for nearly four hours ashore. Then word was received that the Japanese fleet was believed moving in their direction and all American ships were directed to get underway.

Barnett said he delivered MacArthur safely back to USS *Nasvhille* and then headed LCVP 13 full throttle for the attack transport *John Land*, just in time for the landing craft to be plucked from the water. Had he and his crew been five minutes longer in returning, he learned, they just might have been left behind.

The MacArthur landing, says Barnett, will stand out as perhaps the most significant event of his military life, but, as a Navy coxswain, he faced far more dangerous assignments in the Pacific. Drafted into the Navy in 1943, he soon joined *John Land* and participated in invasions of Saipan, Iwo Jima, Tinian, Guam and Peleliu.

Today, the soft-spoken native-born Arkansan and his wife, Nadine, live in House Springs, Mo. They have two children and three grandchildren.

Why was LCVP 13 chosen to carry MacArthur back to the Philippines? According to Barnett's commanding officer, "because he was one of the best coxswains we had." Barnett believed he was picked for the job because he and the general came from Arkansas.

Whatever the reason, the former Navy coxswain stands a chance of having the part he played in real life recorded for all time on film. His life will be linked to the general's in a planned "MacArthur" movie production about the World War II hero of the Pacific.

Facing page top left: World War II ID photo of Coxswain Paul S. Barnett. Facing page top right: Barnett at the wheel of LCVP 13, the landing craft used to transport Gen. MacArthur to the beach. Bottom: Aboard the landing craft: left to right, Sergio Osmena, then President of the Philippine Commonwealth; Col. Lloyd (Larry) Lehrbas, an aide; Gen. MacArthur; unidentified sailor; Col. Roger Egeberg, an aide; Brig. Gen. Carlos Romulo; and Coxswain Paul Barnett. Above: The morning of 20 Oct 1944, as invasion armada arrives to open the Philippines campaign.

from the desk of the Master Chief Petty Officer of the Navy

"Our Women in Navy Blue"

Although many important changes in Navy policies, procedures, and programs have come about during my tenure as Master Chief Petty Officer of the Navy, none has come quicker than those affecting women in the Navy. Because the issue of equal opportunity for women has been in the forefront of the news lately, these changes are thus made ever more dramatic and timely.

During a recent trip to Iceland with the Chief of Naval Operations, I was extremely impressed with the achievements of the 77 Navy women at that command. The number of women serving there has more than doubled during recent years, encompassing a wide variety of ratings. Recent command evaluations have shown that Navy women in Iceland are making valuable contributions to the overall effectiveness and morale of that command.

Such contributions are being seen in every CONUS and overseas activity I have visited where women are an integral part of the Navy effort. There are now more Navy enlisted women (14,435 as of November 1974) serving in more locations and in more rates than ever before.

MCPON JOHN D. WHITTET, USN

In August, 1972, a CNO directive proclaimed that Navy women would be assigned in the same manner as their male counterparts. This means that women are now given orders in accordance with their qualifications and the availability of valid billet requirements at the time of their assignment. The opportunity to perform in a much wider spectrum of duty locations has enhanced and will continue to enhance the careers of women in the Navy today.

Existing legislation places certain restrictions on the assignment of women. Specifically, they may not be assigned to activities whose mission is primarily combatant which include, of course, most seagoing commands, staffs afloat, or any other unit which is subject to deployment to sea. The proposed Equal Rights Amendment to the Constitution, now being considered by the 50 states, may ultimately affect some of this legislation, in whole or part, if it is approved.

The past two years have seen Navy women expanding the range of their assignments. Our female shipmates are now serving in every occupational group and are authorized entry or rating conversion through formal schooling into most ratings. The current exceptions to this job availability are: AW, EW, FTB, FTM, GMM, GMG, GMT, IM, ML, MT, OM, PM, and ST. By necessity, these ratings remain restricted to women since the output of class "A" schools for these ratings is required to fill shipboard or combat aircrew billets.

Some of the more dramatic changes have been in ratings once considered to be male strongholds. Just the other day, I was notified of a phone call awaiting me from a QMSN serving here in the Washington area. To my surprise, the QMSN was female.

When reflecting on this incident, I am pleased to note the many accomplishments that have been made in behalf of and by women in recent years. Assignment of a few women to jobs as quartermaster, boatswain's mate, and aviation ordnanceman is now a fact. Moreover, these advances are being made without permitting development of an adverse impact on the sea/shore rotation of their male shipmates. There's no doubt about it, the Navy is coming to grips with the changing American scene, dealing with it effectively, and continuing to stride forward in the areas of equality of assignment and job opportunity.

How about here at the Bureau? Well, we now have Navy women serving in key administrative roles, including detailer billets, ombudsman roles, and

practically every other aspect of the Bureau's many important functions.

Currently, Yeoman 3rd Class Barbara Williams is serving on my staff as a correspondence and case worker. Petty Officer Williams not only performs effectively in handling correspondence and telephone calls from you and your shipmates but also serves by keeping me up to date and aware of problems related to women in the Navy.

The Women's Equal Opportunity Branch (Pers 613), operating under the cognizance of the Assistant Chief of Naval for Human Goals, monitors the progress of women in the Navy from an overall view. This organization is the watchdog for women's rights and has done much to improve conditions for our Navy women. Their role will expand in the future as women in the Navy continue to broaden their horizons.

Many who doubted the ability of women to perform effectively in jobs that were once assigned only to males have by now seen the light. Navy women are performing effectively. Their contributions have been many and are limited only by current assignment restrictions.

For too many years women have been a much neglected resource in nearly every facet of American society. I, for one, am extremely proud of the continuing high level of achievement exhibited by our enlisted women and am confident that as more doors are opened to them, they will be better utilized and our "One Navy" concept will be strengthened.

Updated—
'Shopping List' of Shore Billets

A "shopping list" of all the shore billets currently in existence both in the United States and overseas is scheduled to be published in early 1975 by the Bureau of Naval Personnel. This will be an update of BuPers-Note 1306 of 16 Jul 1974. The list covers all ratings and all paygrades.

To compensate somewhat for the ever-changing quality of the billet list, BuPers plans to publish a new listing once every six months.

The list is published to help men and women in the Navy in deciding where it's possible to receive a shore assignment, but it is also put out with these cautionary notes: the list indicates only billets which are in existence at publishing date, not vacancies. And the list of billets is constantly changing.

Besides displaying billets by occupational categories—such as MAAG, Instructor, Recruiter, Aircrewman, Independent and General Duty—the list also features a compilation of shore billets available to the EOD/Diver/SEAL/UDT communities. These billets are listed on the last page of the notice.

Some of the billets listed, of course, are now vacant, others may not be available for several years. Those using the list should consult their personnel officer or career counselor to determine the shore tour length for their specific rating and paygrade; determine from the billet listing what is available in the location they desire; and then divide the number of billets authorized by the shore tour length. In this manner, a person can determine approximately how often a billet may become vacant in a certain location.

Correspondence Courses

Among the latest in new and revised Navy correspondence courses (all unclassified), available through naval education offices, are:

Enlisted

Aerographer's Mate 3 & 2 (NavTra 91664-3A)
Commissaryman 1 & C (NavTra 91443-3)
Data Processing Tech 3 & 2 (NavTra 91274-2)
FITS Fire Control Tech G 3 & 2 (NavTra 91341-1)
Hull Maintenance Tech 1 & C (NavTra 91249-A)
Illustrator Draftsman 1 & C (NavTra 91489-2)
Instrumentman 1 & C (NavTra 91385-2)
Personnelman 3 & 2 (NavTra 91420-2)
Quartermaster 1 & C (NavTra 91253-F)
TraDevMan 3 & 2 (NavTra 91698-1C)

Officer

Amphibious Operations (NavEdTra 10512-2)
The Antisubmarine Officer (NavEdTra 10405-B1)
Naval Postal Officer (NavEdTra 10518-A)
Navy Regulations (NavEdTra 10740-B)
Navy Travel (NavTra 10977-9)
Seamanship (NavEdTra 10923-B)
Ship's Store Afloat (NavTra 13109-1)
Supply Afloat (NavEdTra 10980-C2)
Watch Officer (NavTra 10719-6)

Officer correspondence course Airplane Power Plants (NavPers 10961-A4) has been discontinued.

'SEA POINTS' TO BECOME PART OF ADVANCEMENT MULTIPLE

Points for time served in specified afloat units are going to be figured into future final advancement multiples. Data is to be gathered and analyzed during the February 1975 exam cycle with proposed full implementation of the program during the August 1975 and subsequent advancement cycles.

"Recognizing that professional experience gained at sea is more directly oriented toward the Navy mission," a recent NavOp message said, "a sea point program will be instituted to provide tangible recognition of the value of such experience."

Briefly, the program calls for one-quarter of a point to be given E-4 through E-9s for each month of sea duty served in their present pay grade. Sea points will count for seven per cent of the final multiple.

Members in eligible units must have served in their present sea tour for six months in order to earn points. During this period all points earned during previous sea tours in specified units and in current pay grade may be applied towards advancement multiples. At the end of the six months' eligibility period members will begin receiving points which may be added to their previous total. Members ashore will have points computed for previous sea tours in present rate served in specified units.

Upon advancement, members will revert to zero points and commence earning points for their new pay grade. Those advanced at sea will not be required to reestablish eligibility at sea by waiting six months to begin accumulating points.

Members who are reduced in rate will lose all points earned in their previous pay grade and will not be credited with those points earned at that pay grade upon readvancement. Those who are reduced in rate but are reinstated will have sea points computed from their originally established time in rate or sea duty commencement date, whichever is later.

Specified, or eligible, units are: DE, DEG, DD, DDG, DLG, DLGN, CLG, CGN, CG, AGDE, SSBN, SSN, SS, ARS, AGSS, LPSS, ASR, CV types (excluding CVT), AGF, LCC, LHA, LPH, LKA, LPA, LPD, LSD, LSG, PC, AGE, MSO, MSC, AE, AF, AFS, AKL, AO, AOE, AOG, AOR, AG(TASS) and all attached aviation squadrons and detachments excluding CVT. A BuPers Notice will be issued giving specific instructions for the program following review of the February 1975 exam date.

TUITION ASSISTANCE AVAILABLE FOR TRADE OR VOCATIONAL TRAINING

Tuition assistance is now available for Navy personnel pursuing trade or vocational training at private and public technical schools. In the past it has been offered only for college and university training. Payment of 75 per cent of tuition will be made by the Navy for those active duty men and woman who are seeking to enhance their Navy job skills or Navy Enlisted Classification (NEC).

Under the program, private trade schools must be accredited by the National Association of Trade and Technical Schools in order for assistance to be paid. Public trade schools must be accredited by a nationally recognized agency or association listed by the U. S. Commissioner of Education. Learning of trades and vocations through correspondence courses will not be funded under tuition assistance.

briefs navy navy navy navy

LUMP SUM SRB STOPPED; WILL BE PAID IN ANNUAL INSTALLEMNTS

The Navy's authority to pay lump sum selective reenlistment bonuses (SRB) has been rescinded. Effective 1 Jan 1975 all SRB awards, with the exception of those cases where a Chief of Naval Personnel authorization letter has already been issued, will be paid in annual installments only.

According to a recent AlNav message, this action was taken by the Department of Defense in compliance with a Presidential decision. The message says that the action "...is sincerely regretted; however, the need to minimize government and military spending at this time is of paramount importance to our country's economy and your understanding of this constraint is solicited."

MAC TESTS GREATER BAGGAGE ALLOWANCE FOR SOME PASSENGERS

The Military Airlift Command (MAC) is testing a new policy that will allow some passengers to carry more than 66 pounds of baggage on MAC flights. During a test period which will run through the end of March, MAC will accept up to 88 pounds of baggage as a customer courtesy for space-required duty passengers. Space available passengers will still be limited to 66 pounds and excess baggage will have to be shipped by commercial means. Personnel traveling on commercial (noncontract) flights will have to pay for unauthorized baggage in excess of 66 pounds.

THREE NEW NUCLEAR-POWERED SHIPS TO BE HOMEPORTED IN NORFOLK

Three of the Navy's newest ships, USS California (DLGN 36), USS Nimitz (CVAN 68) and USS South Carolina (DLGN 37), are to be homeported in Norfolk, Va. California was commissioned in February 1974 and is scheduled to complete her post-shakedown availability early this year. She is expected to remain in the Atlantic Fleet until 1976 and then be reassigned to a west coast home port when USS Virginia (DLGN 38) is commissioned and will replace her. Nimitz is still under construction and is scheduled to be commissioned this April. South Carolina was commissioned last month.

MERGER TO CREATE NEW INTELLIGENCE SPECIALIST RATING

The photographic intelligenceman (PT) and naval intelligence clerk (YN-2505) ratings are being combined into a new rating--Intelligence Specialist (IS). Conversion will take place 1 Jul 1975. All PTs will be converted automatically to the IS rating on 1 July, while conversion of YNs with the 2505 NEC will be on a voluntary basis. Applications for the IS rating from YNs not holding a 2505 NEC will also be considered. People selected for the changeover will be converted to the IS rating in the same paygrade.

Personnel with the new rating will perform a variety of intelligence tasks, including identifying and producing intelligence from raw information, preparing intelligence briefings, and providing input to and receiving data from computerized intelligence systems ashore and afloat. Those selected or automatically converted will continue to compete in Navy wide exams in their previous ratings until August 1976, when IS exams are scheduled.

All YN personnel interested in converting should submit a request to BuPers (Pers-521) by 1 Mar 1975. In addition, all Navy people are being encouraged to submit ideas and sketches for an IS rating badge. The drawings should be accompanied by a brief statement explaining the concept and should be mailed to BuPers (Pers-6A2). Further details on the new IS rating are contained in BuPers Notice 1440 of 6 Dec 1974.

SONAR TECHNICIAN RATING NOW SPLIT THROUGH PAYGRADE E-8

Sonar Technicians will retain their STS or STG rating designation through paygrade E-8 beginning 1 Mar 1975. In the past, the two service ratings were merged at the E-6 level and all STSs and STGs became STs. Those STs currently in paygrade E-6, -7, and -8 will be converted automatically to the STG or STS ratings. They will, however, continue to participate in the general ST rating exam until separate exams are available--probably in late 1976. E-4 and -5 personnel will continue to take either an STS or an STG advancement exam and there will be no change in the E-9 ST exams. More information on the conversion can be found in BuPers Notice 1440 of 19 Dec 1974.

WSAM SELECTION BOARD FOR PROJECT MANAGERS SCHEDULED TO CONVENE THIS MONTH

The first selection board exclusively for the Weapon System Acquisition Management (WSAM) Program is scheduled to convene this month. The WSAM Program was established to identify officers who have technical or management backgrounds and who are interested in becoming project managers. The selection board will automatically screen all officers who have WSAM coding. Other officers interested in the program can obtain details in BuPers Notice 1040 of 14 Nov 1974.

NEED FOR ENERGY CONSERVATION CONTINUES FOR FY 75

The Navy's fuel conservation goal for FY 75 is to reduce energy consumption by 15 per cent below FY 73 levels. An audit of 57 naval activities in FY 74 indicated that most shore commands have responded well to the energy conservation program. However, some areas that need continued attention are: command energy panels to review and monitor energy consumption, monitoring heating and cooling levels, maintaining efficiency of equipment, improved car pool programs, consolidating material shipments where possible and using transportation that requires less energy. CNO has directed that the energy conservation program continue throughout the naval establishment and that actions be undertaken to further reduce energy consumption by increased attention and efficiency, without adversely affecting mission performance.

GUAM HOMEPORTING OF DESRON SHIPS DELAYED INDEFINITELY

A plan to change the home port of six ships to Guam under the Navy's Overseas Family Residence Program has been delayed indefinitely. The plan, announced last March, would have homeported Destroyer Squadron Nine and its commander and staff on the island. This decision reflects the need for personnel stabilization in a period of rising personnel transfer costs and budgetary restraints. Approximately $2.7 million in personnel moving costs would have been required to make the initial move. CinCPacFlt has emphasized that the Navy will retain the option of homeporting additional ships in Guam in the future, if conditions warrant. USS Proteus (AS 19), currently homeported in Guam, will remain there.

• HOSPITAL SHIP USS SANCTUARY TO BE DECOMMISSIONED

USS Sanctuary (AH 17), the Navy's only hospital ship and the only Navy ship to which women were assigned as crewmembers will be decommissioned in March 1975. The decision to deactivate Sanctuary was made for budgetary reasons. This action will end the women-at-sea pilot program which was started in November 1972.

Over the past two years, 19 women officers and 97 enlisted women have served in Sanctuary. They were assigned to all departments as well as duties in repair parties, combat information center, navigation and communications. They also stood watches and were assigned to other military duties comparable to their ratings on an equal basis and rotation with men. The pilot program, which has been termed successful, indicates that women performed their assignments with ease, expertise and dedication as did their male counterparts in the same jobs.

• SECNAV ISSUES NEW DRUG ABUSE INSTRUCTION

A new SecNav Instruction entitled "Drug Abuse" has recently been distributed to the Fleet. The instruction, number 5355.1 of 12 Oct 1974, which condenses and clarifies two previous drug abuse instructions, reflects SecNav policy. It also delineates provisions of the Exemption Program which allows drug abusers to come forward voluntarily and seek rehabilitative assistance without fear of punishment. Basically, policies remain unchanged except that in the Exemption Program commanding officers are now able to deny a request for exemption when "there are convincing indications that a member is seeking exemption only to avoid being charged with illegal use or possession of drugs."

• LDO/WO PROGRAM CHANGES APPROVED BY SECNAV

Several recommendations submitted by a special study group to improve the limited duty officer (LDO) and warrant officer (WO) programs have been approved by SecNav. They include a proposal to treat each of the programs as a separate entity and to define specific roles that establish distinct functions of the LDO and WO.

In addition, LDO and WO designators will be realigned to identify most members with their warfare community (surface, air or submarine) as is done with unrestricted line officers. Other changes in the proposals will limit the number of applications a member may submit for LDO and WO to not more than two in any one pay grade, establish a minimum and maximum number of years' service requirement, do away with present age limitations and authorize separate paths to either LDO or chief warrant officer, directly from enlisted pay grades. The path to LDO via CWO will still be open, but use of the W-1 paygrade will be terminated.

Under the new program, E-6, -7 and -8 personnel with between eight and 16 years of service are eligible to apply for the LDO ensign program. E-7, -8 and -9 personnel with between 12 and 20 years of service accepted in the warrant program will be promoted to W-2. Some E-9s with between 20 and 24 years of service who have served for two years in what equates to W-2 duties (involved directly in technical areas of a WO specialty) may be recommended by the procurement board for promotion to W-3.

RANGERS CALL SAR TO THE RESCUE

Nine stranded junior high school students—five girls and four boys—were rescued recently in the snowbound northeast canyon of Yosemite National Park by the search and rescue team from the Naval Air Station, Lemoore, Calif.

The students—from Menden-Hall Junior High School in Livermoore—were in the canyon at the 9500-foot level when they were surprised by a sudden storm. On a weekend hiking trip, most of them were wearing only light clothing when the storm began on Monday evening.

Their adult leader, Robert Landfear, hiked about 10 miles through the snow from Cathedral Lake to a Ranger Station in order to seek aid. A call was then placed for a search and rescue helicopter and NAS Lemoore responded.

The rescue helicopter was piloted by Lieutenant Commander Norm Hicks and the co-pilot was Lieutenant Dick Gerrodette. The pilot was forced to abandon his first approach because of blowing snow; he touched down instead at the park's Awanee Meadow where he picked up Yosemite's chief ranger, Bill Wendt.

On the second attempt, the helo landed near several pup tents sheltering the students from the slightly above-zero weather. As it touched down, a Park Service overland rescue team, which had climbed and skied over the rugged terrain, also arrived on the scene.

First order was to determine the seriousness of the situation—Hospitalman Hank Smith, Aircrew Survival Equipmentman Gary Anderson and Wendt found a group of cold but otherwise unharmed youngsters, anxious to end their nightmare.

LCDR Hicks credits the team's intimate knowledge of the terrain and regular exercises with the park rangers with contributing to the success of the mission.

"Because of the weather, this was one of the roughest SAR missions I've ever accomplished," he said.

Facing page top: Happy to be going home and warm at last inside the helo. Bottom: Navy UH-1N Iroquois search and rescue helicopter used to rescue the nine students. Below: The teenagers wade through snow to reach rescue helo. Above: Helicopter pilot scans terrain for stranded hiking students. Right: Mixed emotions as they are rescued.

Rescues. . .

DAHLGREN ANSWERS 'MAYDAY'

It was a dark, cloudy November night with high winds and a heavy swell. The aircraft carrier USS *Saratoga* (CV 60) was conducting flight operations with two destroyers in the Mediterranean Sea's Tyhrrenian Basin.

A mixed task group of Netherlands and U. S. warships operated several miles in the distance with a British submarine. Out on the darkened bridge of the Norfolk-based guided missile frigate USS *Dahlgren* (DLG 12) the watch was busy breaking and executing a myriad of tactical signals as the Dutch task group maneuvered past *Saratoga*.

Suddenly a calm voice from *Dahlgren's* internal announcing system informed the bridge of a conversation overheard in the combat information center between two ships concerning a possible helicopter in the water. Shortly, a ''Mayday'' was declared and the conversing units switched to the assigned Search and Rescue radio frequency.

Although not officially involved, but as a matter of routine, *Dahlgren* followed events.

As directed by the skipper, Commander G. L. Thorpe, the bridge informed the Netherlands' officer in tactical command and headed for the scene. *Dahlgren* was detached from the formation and was made the scene-of-action commander.

At this point, emergency readiness in *Dahlgren* shifted into high gear. The lifeguard detail was set, lifeboat manned, crew informed, signal lights uncovered and manned, and swimmers were suited out. Countless hours of training were about to be put to the test.

Nearing the reported scene, *Dahlgren* learned that four men were in the water. Because of the heavy swell, sighting the helo's crew would be difficult at best. Helicopters already on the scene had recovered two enlisted crew-members; that left two others still in the water.

Several destroyers and *Dahlgren* combed the area at slow speed, dodging each other as they individually spotted and then lost sight of blinking lights known to be on the pilots' lifejackets. Due to the size of the swells, it was decided that a shipboard recovery would be out of the question.

Two blinking lights were spotted. A destroyer passed slowly between the lights and *Dahlgren*. On the bridge, the watch wondered at this destroyer's expertise as she obviously intended to attempt a shipboard recovery. But the destroyer passed. There were the blinking lights again—the destroyer had not seen them.

At that point, *Dahlgren's* motor whaleboat was lowered into the sea. The small boat disappeared in the direction of the blinking lights. Thirty minutes later the whaleboat reported by radio that it had successfully rescued three persons and was returning to the ship. *Dahlgren* began a turn in order to create a lee, block the wind and swell, and facilitate recovery of the boat. It became obvious to the bridge watch that they would be unable to create the lee, however, owing to the

USS Dahlgren (DLG 12)

opposing swell and wind. Recovery would be difficult and dangerous.

As the lifeboat crew tried again and again to lock the quick release devices to the bow and stern of the small craft, the coxswain struggled to keep it from being smashed against the frigate's hull. After 25 minutes, which seemed like an eternity, the boat and its passengers were hoisted aboard. The airmen were examined by the squadron's medical officer and were then made comfortable for the night.

The third man who was rescued turned out to be a swimmer from another destroyer whose safety line had parted. Both pilots and swimmer were in excellent physical condition, considering their ordeal.

The next day all survivors were returned to their parent commands. *Dahlgren* resumed her position within the multinational task group, confident in the knowledge that she had played a leading role in saving five lives and could produce under pressure.

Dahlgren was expected to return to Norfolk in December upon completion of her Mediterranean deployment.

TEAMWORK SAVES HELO AND CREW

Most helicopters arrive on board aircraft carriers at sea by the universally accepted method—they're flown aboard.

Not so with chopper Number 804 of Helicopter Antisubmarine Squadron 5 (HS 5) deployed aboard the carrier USS *Independence* (CV 62) in the Mediterranean. Helo Number 804 arrived aboard via motor whaleboat and aircraft crane.

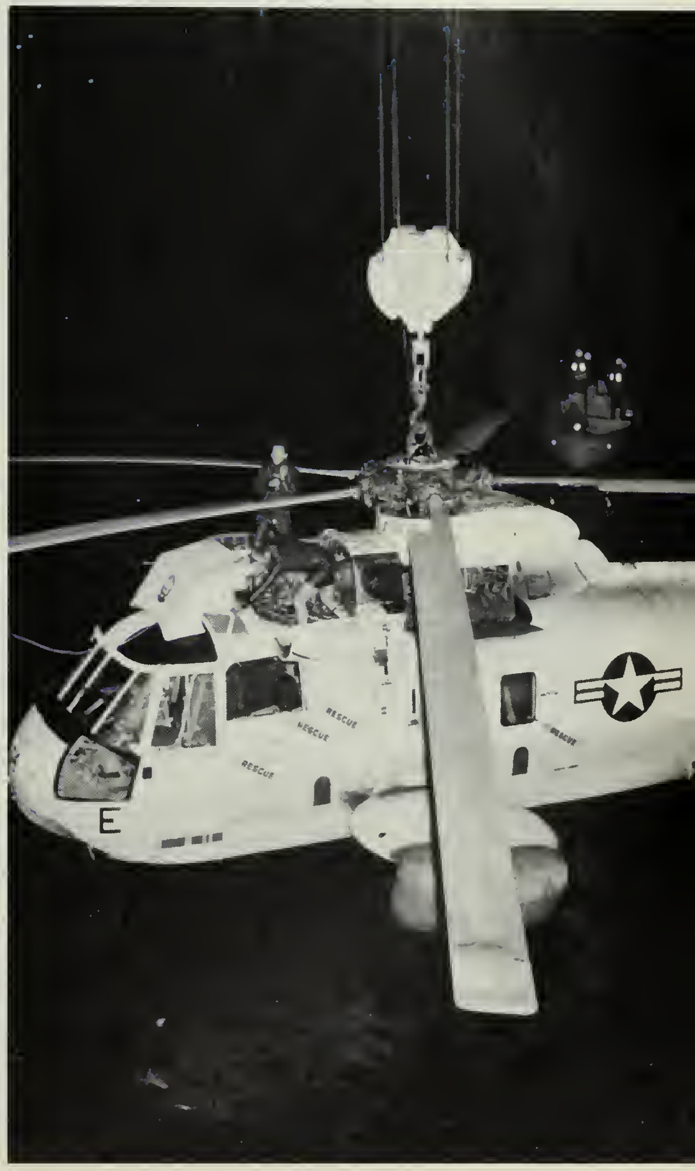
The SH-3D *Sea King* was flying a routine night mission when mechanical problems developed and the pilot, Lieutenant (jg) Ronald Pignataro, was forced to set the craft down in the drink. Thanks to some very skillful flying, the pilot and his co-pilot, Ensign George Palms, landed their craft on a calm sea.

The guided missile destroyer USS *Sampson* (DDG 10) was dispatched to the scene. The ship quickly launched a motor whaleboat and attached a line to the crippled helo. Aircrewmen John Bosse and Patrick McElroy were very happy to see *Sampson's* boat approaching as they sat in their rubber life raft awaitin pickup. (The pilots had been rescued earlier.)

Independence steamed within 100 yards of the disabled aircraft and dispatched two motor whaleboats with the ship's explosive ordnance disposal (EOD) team aboard. Chief Machinist's Mate James Kerr, Chief Hull Maintenance Technician James Spencer, Machinist's Mate 1st Harold Engman and Chief Warrant Officer James S. Thrift, all Navy divers, directed the action from the water.

Fortunately, all the helo needed was a tow and with a motor whaleboat tied to each end of the crippled bird, it was soon placed in position to be hoisted aboard *Independence* by the ship's aircraft crane. The EOD team attached the crane hook to the rotor head and Number 804 was brought aboard without a scratch.

Captain William B. Warwick, commanding officer of *Independence*, credited the quick response by *Sampson* and the combined efforts of the *Indy's* EOD team and deck department with saving the helo crew and aircraft.



USS Independence hoists the disabled helo aboard. Members of EOD team stand by in ship's motor whaleboat. Photo by PH2 R. E. Robinson.

A Warrant Officer on a Shipyard Assignment

PROJECT ENGINEER

At Right: Chief Warrant Officer Fred Hollendonner (right) discusses shipbuilding plans with engineering officer on project. Facing page: Around-the-table discussion between shipyard representatives and naval officer coordinators. CWO Hollendonner is at right.

At Groton, Conn., 13,000 people work together to convert, overhaul, repair and build submarines for the U.S. Navy. Their endeavors run the gamut of subs — fast attacks, fleet ballistic missile and other types of nuclear submarines. To be effective, these projects must receive the attention of men who are highly skilled in their fields — engineers, draftsmen, submarine captains, crews, planners, coordinators and supervisors.

But that's not all. If this activity is to be channeled effectively and productively, a great deal of coordination is necessary and, at Groton, it is supplied by the Supervisor of Shipbuilding's Office. Chief Warrant Officer Frederick R. Hollendonner, served as a kingpin in that office working with the technical people who keep the U.S. submarine fleet at peak strength.

Although CWO Hollendonner is considered to be an exceptionally capable man by Groton's shipbuilding supervisor and Commander Naval Ship Systems Command, his expertise is after all, typical of other Navy warrant officers.

Like other warrant officers in responsible jobs, CWO Hollendonner is a man of practical experience. He served as OOD underway and assistant navigator aboard USS *George Bancroft* (SSBN 643), being commended for navigational accuracy and superior performance of duty in leadership and professional performance. He also holds a degree in electrical engineering from Purdue University.

Mr. Hollendonner was appointed warrant in 1968. When he reported to Groton, he was assigned as ship coordinator for construction of the NR-1 submarine. He learned the ropes through day-to-day contact between the supervisor and the officer in charge of the ship and by monitoring the construction.

His next assignment was a new construction project — the SSN 637 class submarine. While USS *Bluefish* (SSN 675) was being built, he became project engineer and served in the same capacity during construction of USS *Silversides* (SSN 679).

It was a lot to learn for a relatively new warrant officer. As project engineer and ship coordinator, CWO Hollendonner was responsible for coordinating solutions to administrative and technical problems. In his capacity as project engineer, the CWO was the first member of the supervisor's team to act on significant shipboard problems. It gave him a good chance to show whether he could effectively bring about resolutions to these difficulties.

His job as project engineer also made him senior representative and spokesman for the shipbuilding supervisor's office during sea trials of newly built subs. His decisions represented the supervisor's position on the course of action to be taken. To do his job effectively, CWO Hollendonner had to be well aware of the effect of his decisions as work progressed.

But, as project engineer, a warrant officer isn't confined solely to being the link between the ship and the contractor for the daily problems which arise during submarine construction, overhaul and repair. Difficulties also might arise between Naval Sea Systems Command, the Naval Ship Engineering Center and Commander Submarine Force, U.S. Atlantic Fleet, to mention only a few. The CWO has to be production oriented and capable of communicating with civilian and military personnel to achieve his goals.

Contract administration, supervision and overall management and engineering are basic prerequisites for shipbuilding. The ability to communicate, convey important knowledge, plan, organize and use valuable sea experience is essential.

Mr. Hollendonner obviously had the qualifications he needed and the Navy recognized a job well done. Last year he was awarded the Navy Achievement medal for his work from August 1970 to June 1972. CWO Hollendonner has since been transferred to Submarine School Staff, New London, Conn.

. . . "I wouldn't trade this duty for anything . . .

Oceanographic Unit Four

"Quite a few of our enlisted men come to this command and like the duty so much they end up extending for two or three years. I'd say roughly 40 to 50 per cent of our men are on extensions," said Lieutenant Commander Charles K. Roberts.

Unbelievable? When you consider he is speaking of a unit whose standard operating schedule is 23 days at sea and five in port, you might think so. He must be talking about some outstanding duty. He is.

Enlisted men, as are officers, are berthed in two-man staterooms complete with wall-to-wall carpeting and air-conditioning. Many have extensive stereo setups in their rooms. They stand only two personnel inspections each year and eat in a restaurant-like atmosphere with three choices of entrees at every meal.

These extras are earned, however, points out LCDR Roberts, commanding officer of this good duty station—Oceanographic Unit Four.

"When we are surveying, the men work hard. We normally put the hydrographic survey launches into the water at 0800 and they get back by 1700," said LCDR Roberts. "But sometimes it is necessary to launch as early as 0630 and not get back until 1900. Nine or more hours in one of those little 36-foot boats is a long day."

One of five Navy oceanographic units, Number Four is permanently embarked in the Military Sealift Command hydrographic survey ship USNS *Chauvenet* in the Pacific. Its mission is to make charts for merchantmen, fishermen, the Navy and those who ply the ocean near shore.

In addition to command of the 52 enlisted men and seven officers in the unit, LCDR Roberts also has operational control of Support Detachment Alpha, a unit of HSL-31 helicopters; the U. S. Marine Corps' Second Topographical Reconnaissance Platoon; and a team from the Navigation Aid Support Unit in Fort Story, Va. They are all embarked in *Chauvenet*.

"To survey," said LCDR Roberts, "we need to be able to determine our position very accurately. To do this we set up antenna sites ashore in the Republic of the Philippines and in Korea, and man them with the Navymen of the Navigation Aid Support Unit. The sites are usually set up high in the mountains and are virtually impossible to reach by foot. The men live in tents at the sites for about four months. They are taken there and removed by helicopter after the site has been pinpointed by the Marine topographical team."

The hard work and long hours are demanding, but the two-man staterooms and the other benefits seem to make up for it.

But the benefits of being with Oceanographic Unit Four are more than just tangible according to Data Systems Technician 1st Class Robert D. Baird, who is on his third extension with the unit.

"I like the life. The duty is interesting and the work is varied," he said. "We go to ports that not everyone visits, and we do work that not everyone gets a chance to do. We all have to chip in and help during some of the operations. I have it entered in my record that I am a qualified coxswain and I'll bet that not too many data systems technicians in the Navy can say that!"

Fireman Jerry F. Canfield agrees. "This is my second tour on this ship with Oceanographic Unit Four and I've put in for a third extension," he said. "We've got some good petty officers on this ship and the officers are good too. This is number one duty, I wouldn't trade it for anything."

Facing page top: LCDR Charles K. Roberts. Bottom: LT Ray L. Shoaff, Executive Officer, checks ship's position during surveying operations. Above: USNS Chauvenet. Middle: CPO William L. Thurston, Admin Officer, discusses reenlistment opportunities with Petty Officer 3rd Class Ralph R. Amato. Right: Data Systems Technician 1st Robert D. Baird loads magnetic tape into a computer that collects surveying information and records the information onto the tape.

PROFILES
OF THE FLEET

CAPTAIN JOE ADKINS

SQUADRON COMMANDER

Captain Joe D. Adkins settled back in his comfortable leather chair. "It was just me and the sky in those days," he said, reminiscing about his early years in naval aviation.

The native Oklahoman started his Navy career in 1942 when he enlisted fresh out of high school. Shortly after that he enrolled in the Naval Aviation Cadet Program at the University of Oklahoma in Norman. Now, 32 years later, he is the commanding officer of Fleet Tactical Support Squadron 50 (VRC-50) at NAS Cubi Point, R. P.

"One of the first planes I ever flew was an old N-2S *Stearman* bi-plane. Have you ever seen one?" he asked. "I'm sure you have. It's one of those open cockpit, double-winged planes that Snoopy and the Red Baron fly in the Peanuts comics. They're also used throughout the country as crop dusters.

"Yes, sir," he said, "I remember it well. The country was completely involved in World War II and we moved over to Glenview, Ill., to take our flight training. It was so darn cold in those open cockpits that we wore furlined flightsuits and felt masks to keep from getting frostbite. Those were exciting days, it was just you and the sky with no middleman to tell you where to go and how to get there.

"I've flown *Hellcats, Banshees, Corsairs, Bearcats, Skyhawks, Phantoms* and lots of others, and I still get tremendous satisfaction out of flying. But, I'm older now," he said, leaning on his polished desk, "and I fly this desk more than I want to. But it's necessary. I tell myself there's more to the Navy than just flying airplanes. I'm a naval officer first and a naval aviator second."

Then, with visions of barrel rolls and dogfights, he confessed, "But you know, I don't think you'll ever find a naval aviator who thinks he flies enough."

Speaking of his squadron with obvious pride, CAPT Adkins said, "Our mission is to provide rapid airlift of high priority cargo and passengers to the Seventh Fleet. To perform this task you need dedicated people and good aircraft. Fortunately, we have both."

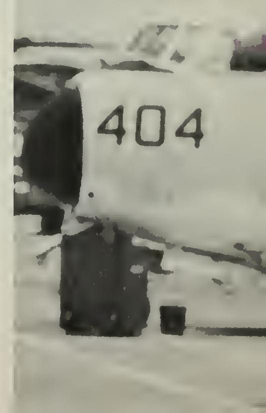
VRC-50 flies twin-propeller driven CIA *Traders*, turbo-prop C2A *Greyhounds* and twin turbo-jet CT39E *Sabreliners*. This, and its 360 officers and men, make it the largest aviation squadron at Cubi Point. VRC-50 is also the only squadron in the Western Pacific providing Carrier Onboard Delivery (COD) service to our deployed fleet.

CAPT Adkins said mail delivery to carriers at sea is the squadron's number one priority. "We try to fly daily COD missions in order to keep the mail and cargo moving. We've all been at sea for extended periods and know what a tremendous morale booster it is to receive mail. The first question our pilots are usually asked after they land on that carrier is 'How much mail do you have?' "

Knocking on his wooden desk for luck, CAPT Adkins said, "I'm happy to say that we've flown over four million miles without any loss or damage to cargo or injury to personnel." Since September 1972 VRC-50 has carried more than 25,000 passengers and over 4.8 million pounds of cargo and mail.

The captain is quick to point out that the squadron's excellent record has been largely because of its highly competent maintenance department. "These men shed 'blood, sweat and tears' to keep those aircraft in an up status," he said. "They're interested in their jobs and often put in their own time to get a 'bird' repaired. I'm especially proud of them because they refuse to accept anything but the best possible maintenance, and that's very reassuring to a pilot at 30,000 feet and a thousand miles from home."

Top left: CAPT Adkins, CO, Fleet Tactical Support Squadron 50. Top right: CAPT Adkins and his line chief, Chief Petty Officer L. W. Ferrell, in cockpit of C-2A "Greyhound." Right: On the VRC 50 flight line.



CAPT Adkins will soon be transferred to the staff of Commander Naval Air Force, U. S. Pacific Fleet in San Diego. When he finally retires he has enthusiastic and ambitious plans to become a law school candidate and begin a second career.

"Why not," he said, "I'm not that old."

—Story by LCDR Tony DeMarco
—Photos by PHC Don Hays

PROFILES
OF THE FLEET

OCS FOR DT3 VILANO

DREAM COME TRUE

"Report to Commanding Officer, Officer Candidate School, Newport, R. I.," his orders read, "Class OC 7502."

Who said it can't be done? Dental Technician 3rd Class Samuel Vilano proved them wrong, but it took a strong mind, patience and perseverance to fulfill his dream.

That vision began with a "Bluejackets Manual," left behind by a furloughing Navy brother, when Vilano was a senior at the Bagio Colleges Foundation, in the Republic of the Philippines. "Since then," he said, "it's been my dream to become an officer in the U. S. Navy, and I read everything about the Navy I could lay my hands on."

Vilano immigrated to the United States and worked as a busboy in a restaurant in San Diego, Calif.

With his goal foremost in mind, he approached the second hurdle—the recruiter's office. He asked for Officer Candidate School and was refused because of his noncitizenship status.

"The recruiter told me that the Officer Candidate School is only open to noncitizens with a professional degree," he said. "But in spite of that I was allowed to take the Officer Qualification Test which I passed."

What was open to him, then, was Dental Technician Class "A" School. Vilano jumped at the chance. One curve was rounded at least—he was in the U. S. Navy.

In January 1973, while in Class "A" School, he cleared one of the highest hurdles when he became a U. S. citizen. He tried again for OCS, but was once more refused. The reason, he was told, was because he needed more "maturing and experience in the enlisted ranks." Instead, he was sent to Japan, almost back to where he had started. OCS, Newport, R. I., was just as far away as ever.

Stumbling, but undaunted, he was soon back in the race when he made a swap from Japan to the closest spot possible to Newport, the Naval Submarine Base at New London, Conn. He was only 50 miles off target now.

The "impossible dream" took another turn. While hard at work pouring impressions at the dental prosthetics laboratory, BuPers contacted him about entering the Naval Aviation Program. It was his turn to refuse. "My vision is 20-70," Vilano quipped.

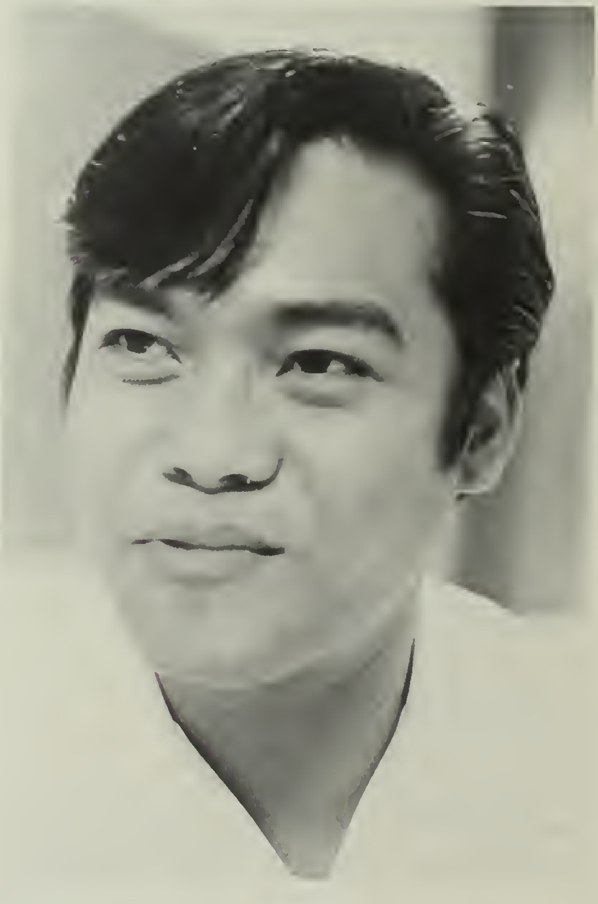
He immediately sought the aid of the submarine base career counselor, but he was not able to help either. Vilano was still out in the field alone.

Next, at the suggestion of a friend, he approached PN2 Edward Kelley who worked in another office on base. Kelley was able to give him the information he needed and contact the people who should be contacted. At the same time, his superiors were alerted and they also helped pave the way.

Finally, Sam Vilano, the ex-restaurant busboy with a B. A. in English, jumped all the hurdles and entered the long stretch to the ribbon when he recently entered Officer Candidate School.

His goal is finally in sight. It will be a hard run, but DT3 Samuel Vilano has shown his prowess. The trophy of his "impossible dream" will undoubtedly be won with the style of an olympic champion.

—JO1 Jesse Jose



PN3 CLAUDIA GRAY

TRAVEL WHILE YOU WORK

How does it feel to have the distinction of being the only woman among 475 sailors? PN3 Claudia M. Gray of the Fleet Maintenance Assistance Group (FMAG) Detachment, San Francisco, can tell you.

"After a little adjustment," she said, "it's great. It showed me a whole different side of the Navy.

"I grew up in a small town, Coventry, R. I., and never saw a ship before coming to FMAG. When I first entered the Navy in 1971, I was sent to the Personnelman "A" School in Orlando, Fla. Upon completion of my training, I was assigned to the Naval Air Station, Lakehurst, N. J., and, after a 14-month tour there, received orders to FMAG San Francisco."

FMAGs are groups of highly trained individuals, all experts in their ratings who travel around and assist ships and units with maintenance problems.

"This is my first time in California and I love it," Claudia said. "I was a little afraid at first that all the men at FMAG would resent my being here, but not so. They are really great and have bent over backwards to help make my assignment enjoyable."

Claudia takes pride in being evaluated as a person on the basis of her accomplishments rather than on the point of being the only woman among so many men. She was instrumental in the establishment of the personnel office and training the nonrated PNs at the San Francisco detachment. Her responsibilities have expanded to include work in the administrative office as well as personnel duties.

Her future plans call for enrollment in a business school at the end of her enlistment. She feels that her experiences at FMAG, including being the only woman there, will help her tremendously in the business world.

Is Claudia a "women's libber?" No, but she says she does believe in "equal pay for equal work."

—Story and photos by
PH1 E. George Norris

PROFILES OF THE FLEET

EO1 RONAL W. BROGLIN

HE MOVES THE EARTH

The peacefulness of the island hideaway was pierced by the sound of breaking branches, grinding treads and a raucous roar as the 46,000-pound construction cat clawed its way up the mud-slick hillside. Still, swarms of insects took to biting the necks and arms of the Seabees as they went about their work.

The constructionmen continued clearing, grading and resurfacing a two-and-a-half-mile road around Grande Island, a recreation spot some 30 minutes by boat from Subic Bay Naval Station in the Republic of the Philippines. The island is used by men of the Seventh Fleet and others stationed at the Subic Bay/Cubi Point complex.

As the road-building project progressed, a single, mud-splattered figure watched the operation. After a few minutes, he made his way back to his jeep and began scraping the red mud from his boots. The jeep then churned down the hazardous path, its driver on his way to inspect the rest of the project. Equipment Operator 1st Class Ronal W. Broglin was doing his thing.

Broglin, a 10-year Navy veteran, is a crew leader of Construction Battalion Maintenance Unit 302 at Subic Bay. The unit provides the area and other military installations in the Far East with timely construction support.

"After I graduated from high school in Illinois," Broglin said, "I went to work for a nearby construction company for about a year assembling road-grading equipment and installing transmissions. This was during the time of the buildup in Southeast Asia. I knew that I would have to go sooner or later and I wanted to choose the branch of service. I decided on the Navy and joined in April 1964."

Broglin received recruit training at Great Lakes, then reported to Port Hueneme, Calif., for his indoctrination into the Seabees and Navy construction work. He later received orders to a Seabee unit which operated all over the Republic of South Vietnam. After his second tour there he was reassigned to Port Hueneme.

His primary assignment for CBMU 302, which he joined in July 1973, is operating and maintaining most of the heavy roadworking equipment for the unit.

"I've found that a lot of people not familiar with

Left: Cleaning the thick red mud off boots is a seemingly endless ritual when working on the road project during the rainy season. **Right:** Broglin checks condition of completed section of highway. **Far right:** A CBMU bulldozer laboriously climbs its way up a steep incline.

Seabees think an equipment operator only drives trucks, tractors and other construction vehicles. But here at 302, in addition to operating construction equipment, I also lay asphalt, survey roads and evaluate construction projects," said Broglin.

"Here on Grande Island, we're reworking the road as part of the bay area security. Sections of the road have been washed away by heavy rain and we're replacing rotted culverts, cutting alternate roads through thick jungle growth and grading over sections that wash down onto the beach.

"The rainy season presents a special problem; our equipment can't work effectively while the road is wet and muddy. As soon as we begin working the rain comes along and washes it away again.

"Down on the beach, the huge wave action carries the sand back into the sea. All we can do is go over it with a large grader and wait for the next storm to tear it up.

"The sand is very soft and unstable. After it's been driven over by vehicles for a couple of months, ruts develop and we have to load our equipment onto a mike boat—ramped landing craft—and bring it out here to do the work all over again. It's a never-ending process."

During his off-duty hours, Broglin conducts an alcoholic rehabilitation course for personnel in the area. His commanding officer, Lieutenant James W. MacLaughlin, said, "He is doing a fine job with the lectures; he seems to be truly interested in the men and they realize this."

Broglin will be leaving CBMU 302 soon and he expects his next assignment to be near his wife's (Elizabeth) home town of Oxnard, Calif.

—Story and photos by JO2 Howard Watters

PROFILES
OF THE FLEET

YEOMAN 3rd BRUCE POTTS

SAILOR, PLAYWRIGHT

A large, black, golden-beaked bird settles down in front of his young Pearl Harbor audience and says, "Hi, boys and girls." When a scattered response is heard, the youngsters are then held spellbound by the antics of part-time puppeteer and full-time Navy Yeoman 3rd Class, Bruce L. Potts.

His soft-spoken bird is just the first of a variety of characters he uses to entertain children throughout the Pearl Harbor area.

"Puppetry and storytelling," Potts says of his art, "have fascinated young and old throughout history. They also give me an opportunity to work closely with children."

Potts enlisted in the Navy in November 1969 after completing three years toward his bachelor's degree in art and speech education at Southern Illinois University. He has been assigned to the Fleet Intelligence Center Pacific since September 1972.

He began his puppeteering in San Diego while working in a popular USO show, "Charlie and the Chocolate Factory." Potts uses oral interpretation of literature

Above: YN3 Bruce Potts at work. Right: Potts and "Gumdrop" perform at Kahala Elementary School in Honolulu. Far right: "Gumdrop" is just one of many characters Potts has created.

PUPPETEER

and creative dramatics as the primary means of conveying his message. This requires a script and a variety of gestures and voices to portray the characters he creates.

"The idea," Potts says, "is to take good children's books and make them come alive. However, many books are not adaptable to oral interpretation because of poor illustration or plots."

After spending hours in libraries and bookstores and fully developing a show, Potts gives it a long look from an audience point of view and often scraps the whole idea. "Because of their honesty, children will quickly inform you if your material is bad."

He began doing puppet shows in Hawaii while a patient at Tripler Army Medical Center in Hawaii, performing on an average of twice a week. "It was quite an experience. The children seemed so depressed and the shows appeared to be good therapy," he said.

Besides the shows at Tripler, Potts has performed at the Easter Seal Camp for Crippled Children, Leeward Community College "Book Fair," and the Hawaii School for the Deaf and Blind.

In preparing for the show at the school for the Deaf and Blind, his stories first had to be put into sign language. Next, he had to use an interpreter.

"At times there were five-minute gaps between sentences while the interpreter explained to the children. It was one of the toughest but most enjoyable jobs I've done."

Besides his ability to make children happy as a puppeteer, Potts has proved himself to be a capable writer. Last year he was asked to write a play with a Hawaiian theme. After a few weeks of research and numerous interviews, he had written, cut, and adapted a play called, "Pardon Me, But Have You Seen a Menehune?"

"I was hesitant, at first, about writing the play. My major concern was not to offend anyone and particularly the customs and legends of Hawaii," he said. The play was performed with great success in many elementary schools on Oahu, Maui and Kauai.

Potts is now writing a second Hawaiian play, focusing on the animals of Hawaii, with particular emphasis on the mongoose, mynah bird and wild boar. He describes his puppet shows for children as a two-way exchange of enjoyment; he gets as much pleasure from performing as his young audiences get from the show.

Riverboat Navy

Way Down South In Dixie

"Split the bridge, Bob!"

This order to set a course that would take the minesweeper (MSB 36) under Charleston's Cooper River bridge for the last time came down through the voice tube to the pilothouse from Chief Quartermaster Dale Murphy just before dawn recently.

At the helm, Electrician's Mate 1st Class Danny Bobbitt skillfully brought the craft around to starboard and steadied up on course.

Chief Murphy, boat captain of the 57-foot minesweeper, along with Lieutenant Charles Henke as officer in charge and a six-man crew, had just backed quietly away from the Mine Squadron 10 pier in the predawn mist outbound to North Augusta, S. C., via the intracoastal waterway and the Savannah River.

As the 21-year-old, diesel-powered minesweeper slipped under the twin spans linking Charleston with Mount Pleasant, LT Henke and Chief Murphy sipped hot coffee and navigated their craft through the harbor.

There was a hint of rain in the air as the boat slipped past the historic Charleston peninsula to starboard and Fort Sumter to port. Abreast of the Coast Guard Station, the chief passed the word to come to port and MSB 36 started through the Wappoo Cut where the waterway narrows drastically.

For the crew, it would be a round trip, but for MSB 36 it was her last active Navy cruise. MSB 36 was on her way to a new assignment as a training craft for the NJROTC unit at North Augusta High School.

Just into the Wappoo Cut, Chief Murphy ordered two short blasts on the whistle and brought the twin diesels to all ahead idle. MSB 36 had come to the first of several swing bridges which would have to give way during the next four and a half days and more than 350 miles of inland waters.

As Chief Murphy stood the boat off, waiting for the bridge, he ordered the signal several times. Finally, the bridge swung, and as the wooden-hulled boat slipped past, the delay was explained by a shout from the watchman: "I thought you were a much smaller craft," he yelled.

Ignoring the ribbing, the crew went about its business and settled into the routine which would characterize the rest of the trip. Bobbitt, relieved at the helm by one of the other crewmen, was below decks, cooking breakfast in the tiny, cramped galley that would horrify the average housewife. The aroma of eggs and bacon drifted up into the pilothouse as the sun broke through a cloud-scattered sky.

Just past noon, Chief Murphy began his approach to the municipal piers at Beaufort, where mooring of the craft was assisted by retired Rear Admiral Herman Kossler, a former commander of the Mine Force. RADM Kossler, who was visiting in Beaufort, handled the lines skillfully as he greeted the crew.

Once MSB 36 was secured, Enginemen 1st Class Jimmie Jacks and Jack Williamson, along with Fireman Apprentice Jerry Flynn, lifted the two engine hatches and thoroughly inspected and wiped the engines clean. Meanwhile, Boatswain's Mate 1st Class James L. Brown and Seaman Larry Wright, deck crew of MSB 36, went about securing lines and stowing equipment topside.

After the engineering spaces were checked out and the craft was spruced up topside, Flynn and Wright took in the lines and the minesweeper continued down the intracoastal waterway on its way to Savannah.

By late evening, MSB 36 was gliding past the waterfront panorama of the old city. With the help of Savannah Port Authority agents, the small boat tied up at

Facing page top: MSB 36 at Charleston Naval Station. Facing page bottom: MSB 36 steams up the Savannah River. Above: LT Charles Henke, officer in charge, gives orders to helmsman as Chief Dale Murphy checks their position on an intracoastal waterway chart. Below left: Boatswain's Mate 1st Class Jim Brown (seated) and Fireman Apprentice Jerry Flynn relax on the fantail of MSB 36 as she passes one of several swing bridges during trip to new duty station. Below right: Early morning on the Savannah River.

commercial pier number 16 in front of a foreign merchantman which dwarfed both boat and men. The easy part of the trip was over.

From Savannah on. Chief Murphy and LT Henke would be on the bridge at least 12 hours a day, carefully plotting the course through the twists and shallows of the Savannah.

Early the next morning, MSB 36 once again backed quietly from her mooring and the trip upriver began.

For the next three days, MSB 36's diesels droned past bright autumn foliage, unmarred by civilization on either bank, until she approached the Clark Hill Dam and went through the locks just before twilight on the fourth evening.

The following morning, in dress blues, LT Henke, Chief Murphy and the rest of the crew brought MSB 36 to the municipal piers at Augusta.

There, they were greeted by the entire NJROTC unit, headed by retired Commander John A. Swank, naval science instructor and retired Chief Gunner's Mate Elliot W. Calk, assistant naval science instructor to the NJROTC unit.

In a brief ceremony, MSB 36 passed from the active Navy rolls to her new assignment. There was a note of sadness to the formal ceremonies as the veteran minesweeper changed hands.

Who knows, maybe one day, a future Chief of Naval Operations will recall the practical lessons in seamanship, engineering and navigation learned aboard an elderly wooden-hulled minesweeper on the Savannah River.

—Story and photos by JOC John J. Gravat

Top: Chief Dale Murphy supervises the anchoring detail. Middle: EM1 Danny Bobbitt (at helm) takes MSB 36 out of Charleston Harbor. EN1 Jack Williamson handles the engine controls. BM1 Jim Brown (far left) and EN1 Jimmie Jacks provide a "seaman's eye" in the narrow waters of the Wappoo cut which took the minesweeper into open water on the intracoastal waterway. Bottom: Seaman Larry Wright of MSB 36 heaves the first line over as the minesweeper arrives at Beaufort, S. C.

SSGT Floyd L. Choat

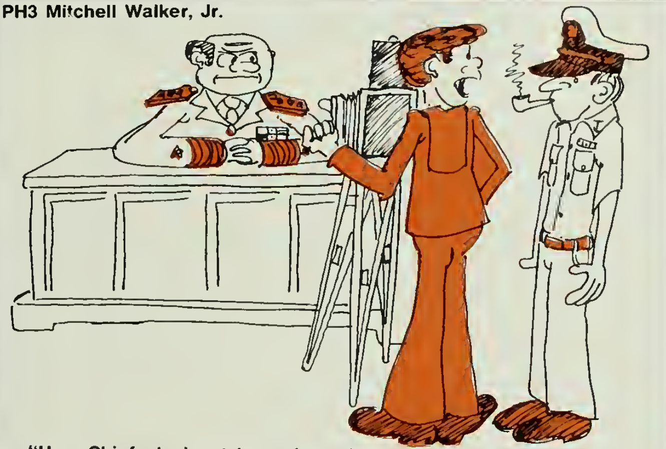
"No, I'm not going to tell him; you tell him!"

SSGT Floyd L. Choat

"And when we finish here, we'll do the captain's office, then we'll start on the galley and then we'll . . ."

on the serious side

PH3 Mitchell Walker, Jr.



"Hey, Chief, do I get hazardous duty pay if I get through this alive?"

STCS Warren L. Witas

"Your first time aboard ship, sailor?"

ST1 Joe Franklin, Jr.

"Swab? Deck? Head? Why didn't you say you wanted me to mop the bathroom floor?"

TAFFRAIL TALK

When AO1 William Johnson completed the La Verne College PREP Program at NAS North Island, San Diego, Calif., he received his diploma from the college director along with a familiar handshake—a hand he'd grasped six years before as he first reenlisted in the Navy.

It so happens that the college's director and Johnson's former commanding officer are one and the same.

The reenlistment took place when Petty Officer Johnson was serving as an ordnance shop chief and air crewman for then Commander John E. Kemble (now retired) who was commanding officer of VC-4 at NAS Oceana, Va.

After his retirement, CDR Kemble became director of the La Verne College program for the San Diego area. Johnson, who completed the PREP course in just 12 weeks through the college's Rapid Learning Lab—a lab specially equipped with modern teaching machines—now serves as an instructor in the Air-Launched Weapons School at North Island. He plans to continue his off-duty education at one of the community colleges in the San Diego area.

* * *

Twenty Hawaii state library technicians found it difficult recently to browse through the library of the ocean minesweeper USS *Conquest*—it measures three by five feet.

The technicians, all students at Leeward Community College in Pearl City, were studying different types of libraries and their systems. On *Conquest* they learned how small shipboard libraries operate and gained some familiarization with Navy shipboard routine. So says Journalist 3rd Class Kathryn Hoogeboom, who accompanied the librarians on the visit, and reported to ALL HANDS their experience of a mini-library afloat.

The 171-foot minesweeper didn't always have a useful library. A year ago the ship's book collection was only a two-shelf closet with a few paperbacks. It now has 16 well stocked shelves, a complete set of encyclopedias and a good selection of fiction and non-fiction books, enough reading material to satisfy the demands of the 65 men aboard.

The *Conquest's* librarian, Interior Communications Electrician 2nd Class Terry McElhaney, exchanges books at the Pearl Harbor Library Exchange. Rotating hardcover books every two months and paperbacks every month keeps a fresh stock constantly available for the crew's enjoyment and education.

Not only small ships like *Conquest* are serviced by the Library Exchange. All ships with libraries—ranging from small minesweepers and fleet tugs to aircraft carriers with full-sized, walk-in libraries—use the Library Exchange. The Navywide system is set up to supply books to ships and small stations on a rotating basis and guidance in operating libraries is provided by the regional librarian.

The regional librarian (Pacific), Mrs. Arlene Luster, has helped many ships reorganize their libraries, including *Conquest*. She has found those ships which hadn't developed their libraries to the fullest didn't know how to go about it.

The All Hands Staff

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

ORIGINAL ARTICLES and information of general interest may be forwarded addressed to the Editor, ALL HANDS, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, 2221 Jefferson Davis Highway, Washington, D. C. 20360.

DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for each five naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.

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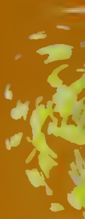
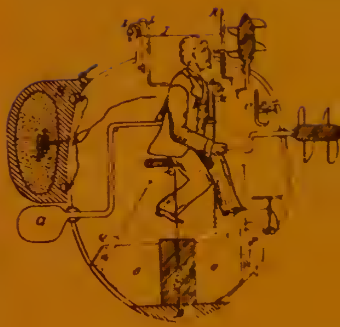
PERSONAL COPIES: The magazine is for sale by Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. The rate for ALL HANDS is $1.65 per copy; subscription price is $19.00 a year, domestic (including FPO and APO address for overseas mail); $23.75 foreign. Remittances should be made payable to the Superintendent of Documents and forwarded directly to the Government Printing Office at the above address. Subscriptions are accepted for one, two or three years.

Right: This photo by Photographer's Mate 2nd Class Harry E. Deffenbaugh, Jr., captures the quiet air of readiness demonstrated by the crash crewmen standing by as a helicopter comes in for a landing on a Sixth Fleet cruiser during operations in the Med.

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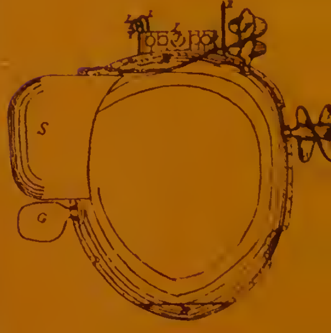
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SURFACE NAVY – THE NEW LOOK

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ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

MARCH 1975 NUMBER 698

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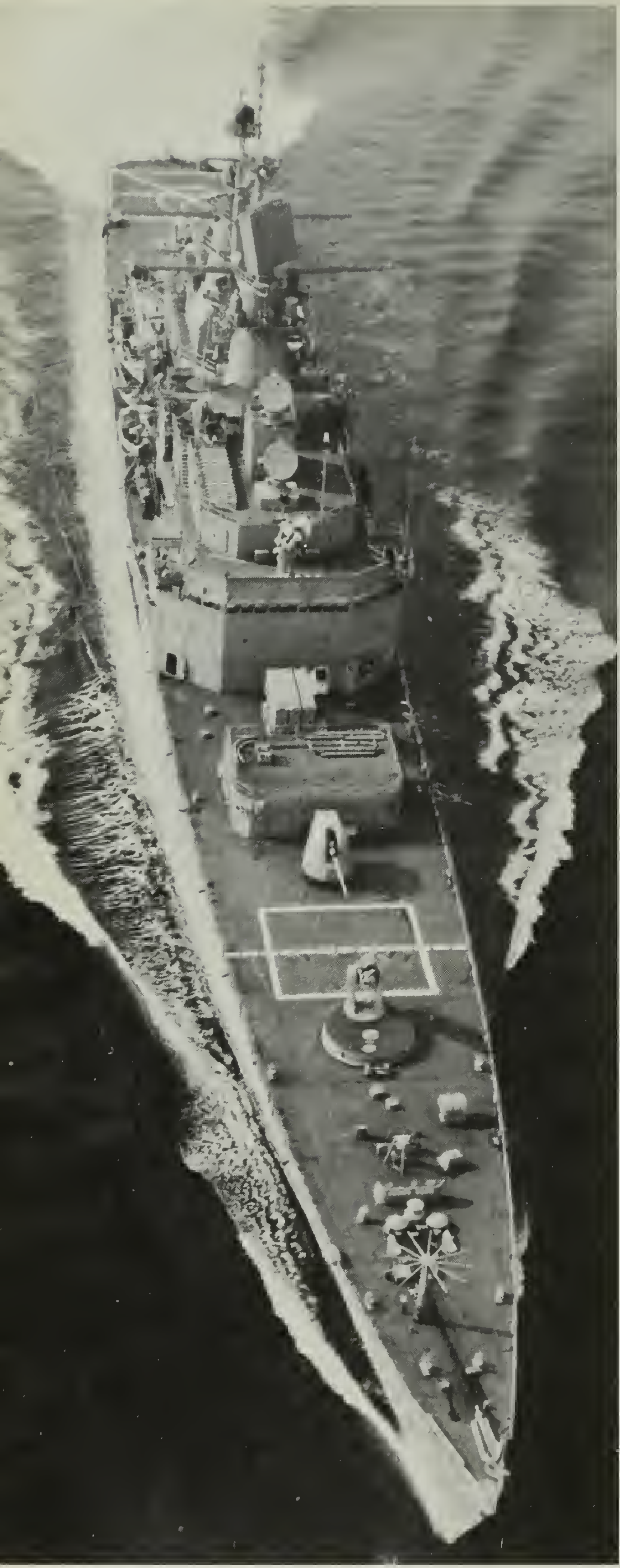
Front cover: Amphibious Assault Ships USS Tarawa (LHA 1) (foreground) and USS Saipan (LHA 2), combining features of LPH, LKA and LPD into single hull. Back cover: (clockwise) Surface Effect Ship 100B; newest of Spruance class destroyers, USS Paul F. Foster (DD 964); hydrofoil Pegasus (PHM 1); nuclear-powered attack aircraft carrier USS Nimitz (CVAN 68). Photos by PH1 Rich Pendergist.

Inside front: Members of the precommissioning crew of USS Pegasus (PHM 1) stand inspection in front of their new ship, still under construction at Boeing Hydrofoil Division, Seattle, Washington. Photo by PH1 Richard Pendergist.



SURF
THE

In the beginning, the United States Navy was an organization of surface ships—it couldn't have been anything else. Then one day a submarine was commissioned and the Navy went under the surface; another day the Navy accepted its first aircraft and it went over the surface. Yet, the surface Navy remained the basic force, with submarines and aircraft still considered to be in the development and novelty stage.

Then a peculiar thing happened, the "silent service" and naval aviation became elite and prestigious. People were eager to see service in them because of their glamor, and also because they offered such amenities as special schools, pay and training, accelerated promotions, new equipment and other opportunities not quite so available in the surface Navy.

The surface Navy fell farther behind, some experts claimed, to a very distant third place in the fight for personnel, money, material and prestige. New ships and weapons were still being built for the surface fleet and people were still serving in that arm, but not at the rate needed.

For some time those at the helm of the sea service have been extending their efforts in behalf of the surface Navy, and now we are beginning to see the fruits of a massive ship modernization drive.

This drive has seen the surface Navy take on a new vitality, regaining lost ground. Once again we are seeing the surface element moving ahead to garner a special prestige of its own. What follows is a SITREP on the surface Navy today and a glimpse into its future. A large part of this article is taken from an interview with Vice Admiral F. H. Price, Jr., Deputy Chief of Naval Operations (Surface Warfare). VADM Price's comments are enclosed in quotation marks throughout the article.

Left: USS South Carolina (DLGN 37). Right: USS Pegasus (PHM 1).

ACE NAVY

NEW LOOK

The Navy's Shipbuilding Program

The largest, most important element needed in the surface Navy has been new ships, not only new in years but also new in design, concept and mission. What is evolving is exciting and refreshing after many years of having to make do with a Fleet force, a large part of which was created during World War II and the years immediately following.

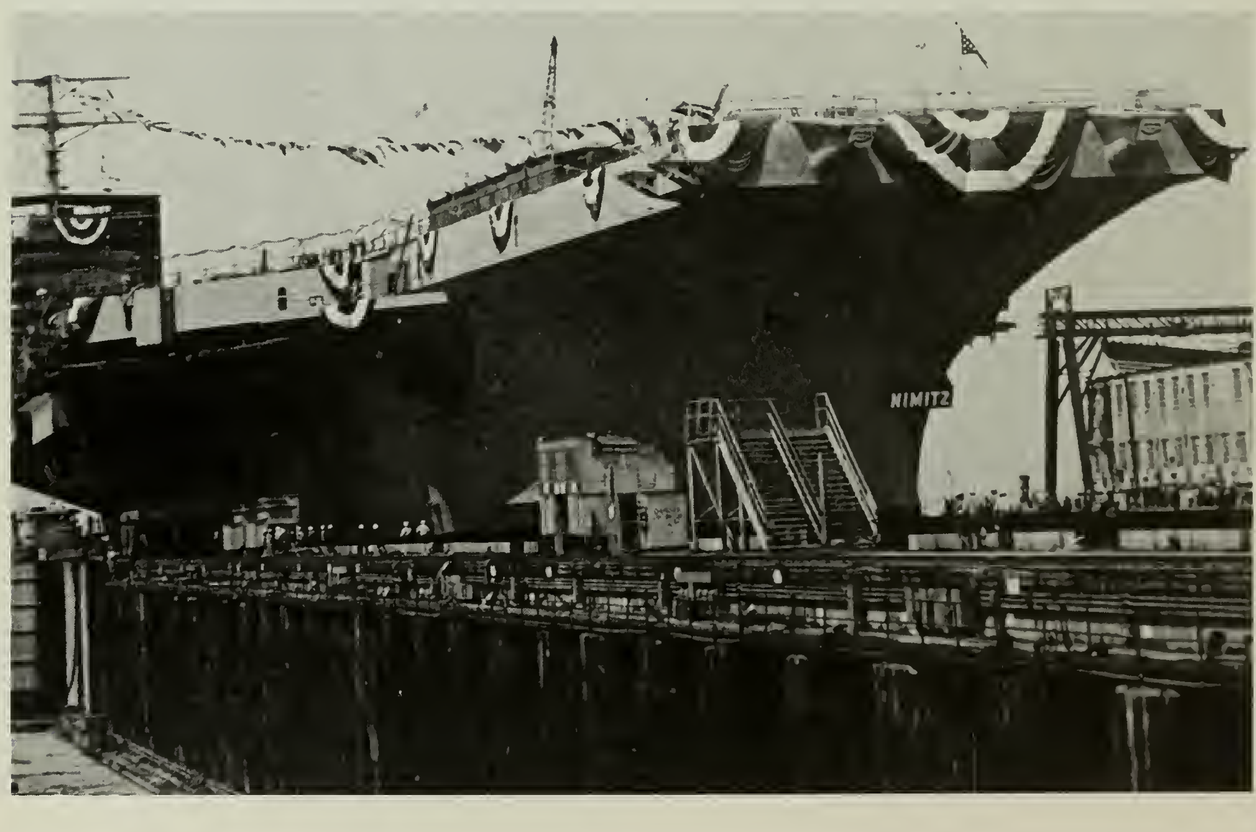
In VADM Price's words, "We have embarked on a very ambitious program for the past several years to define and deliver suitable replacements for those elements of our fleet which, with the passing of time, becoming increasingly less responsive to our needs. This watchword is 'modernization'."

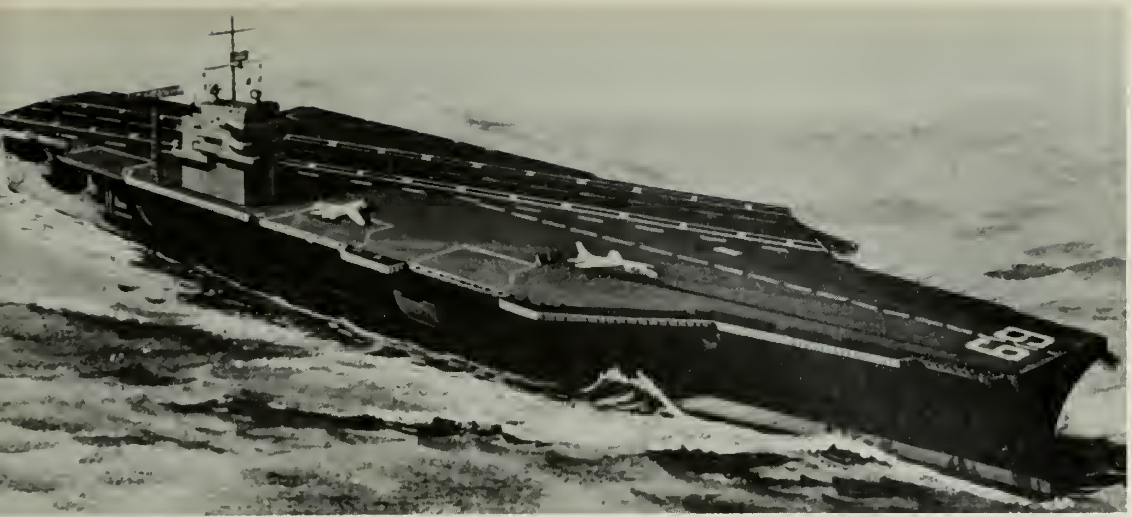
He explains how this replacement program will work and the philosophies behind it. "We are not going to replace ships on a one-for-one basis. Instead, we will be introducing new classes of ships that are significantly more capable than their predecessors and ships that are designed to respond to an increasingly complex range of missions."

Thrust of these efforts will be a concept of ". . . obtaining the required number of exceptionally capable ships, complemented by a relatively larger number of less expensive ships which can function together in a mutually supporting way. Under these terms, as exceptionally capable ships, we will be acquiring nuclear powered aircraft carriers, guided missile frigates and other highly capable, multimission ships.

"These are exciting new ships which will add to our strength and flexibility. For example, we have recently commissioned the first and second of a new class of DLGNs, USS *California* (DLGN 36) and USS *South Carolina* (DLGN 37). These ships will be utilized with our nuclear powered carriers to gain a series of fast reaction nuclear powered carrier task groups. We will thus have the capability to deploy these forces on very short notice to any spot in the world to react to any situation that calls for the application of this type of presence.

"On the less expensive side, we are pressing for the patrol frigates and missile-equipped patrol hydrofoils. We will also be developing, as assets permit, new classes of amphibious and service force ships to provide for a modern balance throughout the Fleet."





Facing page top: VADM Frank H. Price, Jr. Facing page bottom: USS Nimitz (CVAN 68). Top: Artist's conception of USS Dwight D. Eisenhower. Above: USS Capodanno (DE 1093).

The New Surface Combatant Ships

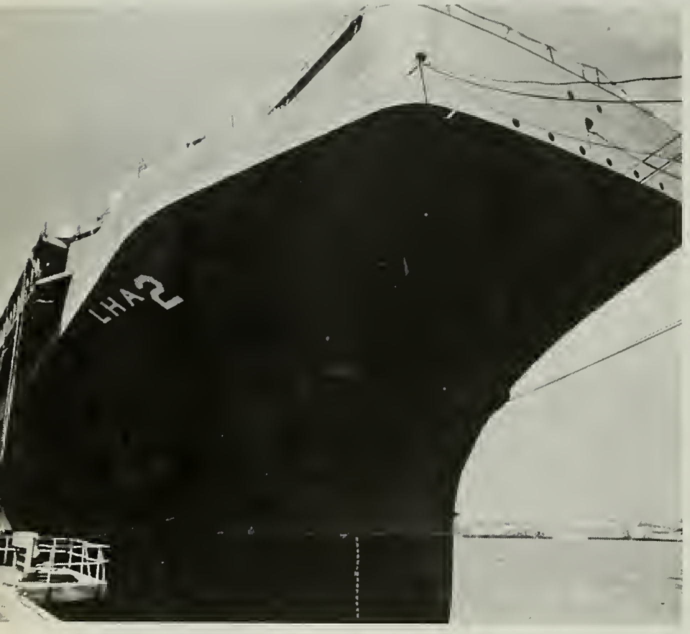
As World War II vintage surface ships are being phased out of service, the surface Navy will begin to take on the modern look outlined by VADM Price. These are the combatant ships that will be in the Fleet of the future:

- ***Aircraft carriers.*** The nuclear powered carrier force is growing. USS *Nimitz* (CVAN 68) is scheduled to be commissioned in April, and USS *Dwight D. Eisenhower* (CVAN 69) sometime around the middle of this year. The Navy's fourth nuclear powered carrier, CVN 70, is scheduled to go into commission early in 1981.

While nuclear powered carriers are increasing, carrier force levels are being reduced overall. For this reason, the concept of providing carriers with both tactical air and ASW capabilities is being emphasized. This proved successful aboard USS *Saratoga* and, consequently, a program to convert all attack carriers to the multipurpose CV configuration was initiated. CVAN 68 and 69 are also scheduled to be converted to CVNs.

- ***Spruance Class Destroyers.*** According to VADM Price, the Navy's prime ASW destroyer, the DD 963 *Spruance* class, will shortly be introduced into the Fleet. Five ships of this class have been launched to date. The first is scheduled for delivery in late spring and 29 will follow within the next few years. They are being fitted with our most powerful sonar, coupled with helicopters and our best ASW weapons. In addition to an effective Point Defense System, the *Harpoon* surface-to-surface mission system will be incorporated in this class as soon as the systems are available.

The *Spruances* will operate in company with the carrier task groups to provide ASW and surface warfare protection, though they can be used very effectively



in a wide variety of other missions as well. We have a good margin for growth designed in these ships and anticipate that they can be readily adapted to a wide variety of weapons and sensors in the future." (See ALL HANDS, May 1974, p 9).

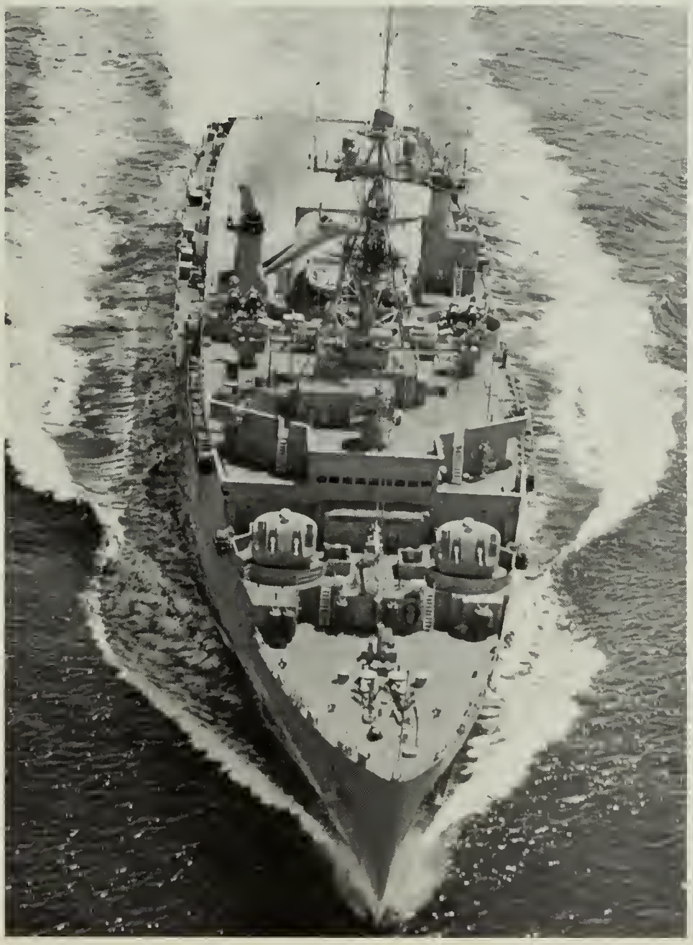
- ***Patrol Frigates.*** "These will be entering the Fleet in the late '70s as the nominal replacements for the World War II destroyers we have retired due to age and obsolescence. They will be equipped with LAMPS helicopters, torpedoes, *Harpoon* missiles, standard missiles and the rapid-fire 76mm Oto Melara gun. They will significantly enhance our area AAW capabilities, and will be well adapted for both antisubmarine and antisurface warfare. Current plans call for production of 50 ships of this class and a strong argument can be advanced for even more." (ALL HANDS, Aug 1974.)
- ***Surface Effect Ships.*** The SES skims over the water on a cushion of air. Currently, two 100-ton SESs are being tested and one of them has achieved a world record of greater than 80 knots. Preliminary design of a 2000-ton SES has been completed. Potential missions include ASW, AAW, amphibious assault, surface warfare and tactical support, but the most promising applications of the SES remain to be established. The SES's primary asset is her speed, and this will probably make her primary mission ASW operations. A 3000-ton destroyer type SES could cover three times the area of a present-day destroyer, and deliver an antisubmarine helicopter to a specific spot in minutes. With such speed, this type of SES could outrun any torpedo launched against her. (See ALL HANDS, Jan 1974, p 3.) and Jan 1975, page 8.)

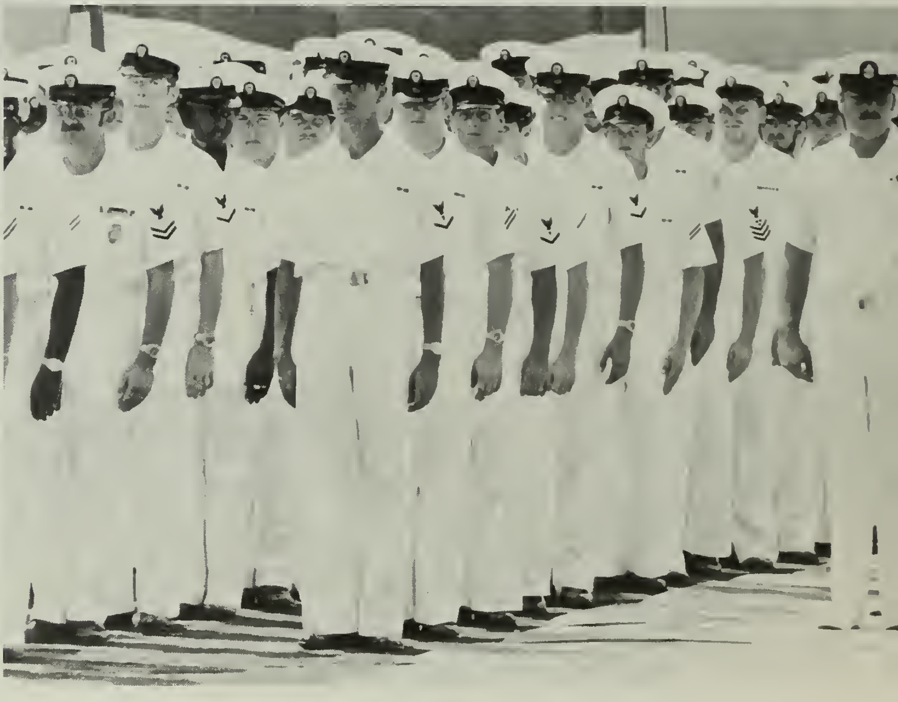
Amphibious Force Ships

Fifteen per cent of the Navy's ships are in the Amphibious Force. The main battery of this force, unlike many of their sophisticated sisters, is not the high cost hardware built in but the flexible projection of power ashore intrinsic to the Marine landing force. Our current collection of modern 20-knot ships, each type having its own primary capability—for example, helicopter platforms (LPH), landing craft carrier (LSD/LPD), beaching ability (LST) and troop and cargo carriers (LPA/LKA/LPD)—but also versatile to the extent that they are often called upon to support other fleet actions. The lessons we have learned in developing these various amphibious ships are probably best illustrated in the LHA.

- ***Amphibious Assault Ship.*** VADM Price: "Plans are to commission the first LHA, USS *Tarawa* (LHA 1), this summer. This entirely new class of amphibious ship houses modern mechanized equipment to assure rapid offload of the Marine assault force which will move ashore in either helicopters or landing craft, or both. The command and control facilities are extensive, adding to the versatility of controlling the entire amphibious operation." We have a balanced versatile amphibious force, but we are not standing on our laurels. VADM Price: "In addition to the LHA, we are also

Facing page top: USS Paul F. Foster (DD 964). Facing page bottom: USS Saipan (LHA 2). Above: USS Brunswick (ATS 3) tows aircraft carrier USS Constellation (CVA 64) during an exercise. Below left: USS Ponce (LPD 15). Below right: USS Spruance (DD 963).





looking at replacements for the LSD-28 class that will be 30 years old in 1984. For ship-to-shore mobility, air cushion technology may offer the first major advance since the helicopter." *Tarawa* will be the first entirely new class of amphibious assault ship to join the Fleet in the past decade. (ALL HANDS, May 1974.)

- ***Patrol Hydrofoil (Missile).*** "The Patrol Hydrofoil (missile) is yet another particularly promising ship. It can be used offensively against major surface combatants and other surface craft, and is well suited for surveillance and blockading roles as well. The *Harpoon*-equipped PHM will be powered by a gas turbine driving a water jet propulsion system. The first ship, *Pegasus*, has just been launched and, after testing, will be delivered to the Fleet. The 'small ship Navy' has a dramatic future in that it enables us to gain significant firepower while utilizing relatively little manpower." (See ALL HANDS, Jul 1973, p 2.)

Service Force Ships

Getting a modern fighting surface fleet is important, but perhaps just as important is procuring new service force ships for support. Like many of the present surface combatants, a great many of the support ships afloat are old—some of World War II vintage. VADM Price had some views on the service force itself:

"The mobile logistic support force is a combination of ships, personnel and commands which enables the delivery of underway logistic support to naval forces in combat or peacetime deployment areas on a worldwide basis. The mobile logistic support force is comprised of three groupings—underway replenishment ships, major fleet support ships and minor fleet support ships. Destroyer tenders provide specialized logistic, personnel, maintenance and repair support to surface combatant ships.

"The large scale modernization of the support ship forces has been repeatedly deferred, because of their lower priority. It now lags far behind modernization of the combatant ship forces. Consequently, there will still be more than 50 World War II support ships in the active Fleet at the end of fiscal year 1977. Since the mobility and staying power of our combatants is tied to support ships we, clearly, can no longer defer a major effort to modernize these forces.

"We proposed a 32-ship building program commencing in fiscal year 1975, which will include 10 fleet oilers, five destroyer tenders, two submarine tenders, two ammunition ships, three combat stores ships and 10 Fleet ocean tugs. These ships will be delivered between fiscal years 1978 and 1983, leaving about 25 World War II-constructed ships still in the active Fleet, even at the end of fiscal year 1983.

"The Navy's plans are to maintain our relatively new, fast UNREP (underway replenishment) ships with Navy manning to ensure carrier task force integrity. These multiproduct ships and new AEs provide the fast transfer rates and a wide range of logistic support and overall responsiveness to our carrier task groups essential to combat effectiveness."

How about civilian-manned UNREP ships, or commercial ships?

"The supporting evidence from our liaison with the British Royal Navy and the 25 years of experience of the Military Sealift Command show convincingly that in less demanding roles, replenishment can be accomplished by either USN or civilian-manned MSC ships.

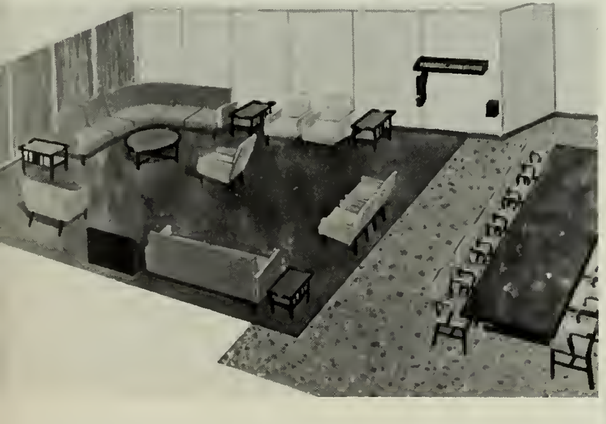
"The Charger Log program is a series of tests to determine if merchant ships in commercial service or the MSC-controlled fleet might perform underway replenishment in wartime or during 'surge' requirements at cost savings to the Navy.

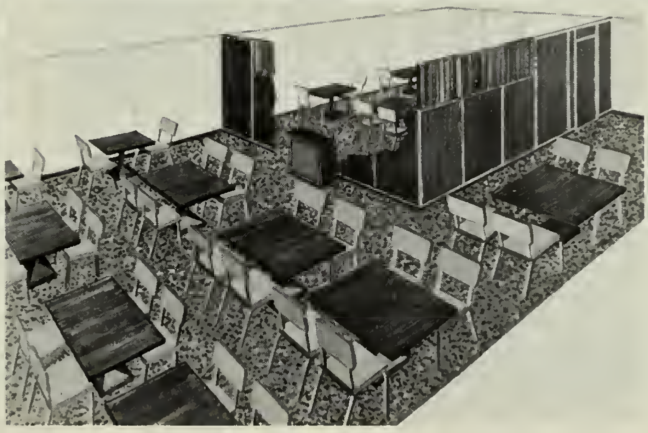
"The Charger Log I test showed the potential of U. S. flag tankers to resupply Navy/MSC forces or for point-to-point sealift in crisis situations. This support played a large role in the U. S. Sixth Fleet operations during the October 1973 Arab-Israeli War and further showed the ability of commercially operated, civilian-manned shipping to be rapidly integrated into the Navy's missions. Other related items in this area are: a Charger Log VII test held late last year and a present research initiative in developing U. S. flag containership cargo handling equipment and procedures to make them compatible for underway replenishment on a limited scale."

Mine Warfare

An area of the surface Navy much ignored over the past several years, mine warfare has taken on greater importance recently. VADM Price's comments:

"Mine warfare had its start in the early beginnings of the development of the art of naval warfare. Then, as now, a mine was developed, and was immediately followed by developments to counter the mine. This situation remains true today. Mine warfare, often considered a 'stepchild' among more sophisticated forms of modern naval warfare, is the subject of renewed interest as a result of 'Operation End-Sweep' (clearing of Haiphong Harbor) and 'Operation Nimbus Star'





Facing page top: Navigator Kevin Carman uses sextant to determine ship's position. Facing page bottom: Prototype crew wardrobe locker designed for hanging and flat stowage. Center: New crew, new look. Officers and crew of USS Valdez prepare to go aboard during commissioning ceremony. Above: Proposed configuration of officer wardroom, messroom and lounge. Right top: Bridge of carrier, USS John F. Kennedy. Right bottom: Proposed configuration of crew and first class mess.

(clearing the Suez Canal). This interest manifests itself in continuing research and development in the two major subdivisions of mines and mine countermeasures. Within the mines portion, these new developments include an antisubmarine mine which may be planted at far greater depths than possible before; kits which will allow bombs to be converted to mines; and a capability to command control offensive minefields from extended distances.

"In mine countermeasures, including minehunting, progress is being made in providing minesweeping helicopters with gear which can be streamed with greater ease and which has improved capabilities; providing the minesweeping helicopter with a minehunting capability; developing a surface mine countermeasures capability to minesweep or minehunt in deep ocean depths; and developing an entirely new mine countermeasures ship.

"In keeping with the trend toward a smaller, more efficient Navy, progress is being made in the mine warfare organization in addition to equipment. Traditionally, mine warfare forces were considered as a part of the surface community. As air and submarine forces become more involved, it is evident that the organization, its role and mission must be restudied. As envisioned now, the current mine warfare force type commander will become a CNO Fleet Activity [ashore] with responsibilities for support of Fleet commanders in performing mine warfare functions, plus providing mine warfare expertise at all echlons." *(Cont. on page 11)*

INTRODUCING

COM NAV SURF LANT

COM NAV SURF PAC

In an effort to upgrade and make the surface Navy more effective, all surface units have been combined under two type commanders.

On 1 Jan 1975, Commander Naval Surface Force, U. S. Atlantic Fleet (COMNAVSURFLANT), was established, following the disestablishment of COMCRUDESLANT, COMPHIBLANT and COMSERVLANT on 31 Dec 1974.

Commander Naval Surface Force, U. S. Pacific Fleet COMNAVSURFPAC, was established in a developmental status on 1 Jan 1975. (COMCRUDESPAC and COMPHIBPAC will be disestablished 31 Mar 1975 and COMSERVPAC will be disestablished 30 Jun 1975.)

Both of the new type commands are scheduled to become fully operational 1 Jul 1975. These commands encompass the functions of the amphibious, cruiser-destroyer and service force type commands in both the Atlantic and Pacific Fleets. The rationale behind this action is to achieve an organization which will permit more effective management and utilization of existing resources, thereby improving the support-to-combat ratio, and eliminate duplication in administrative and support areas, thereby generating savings in common overhead.

The change will also boost the surface force's status by making it one naval community similar to naval aviation and the submarine force.

Weapons Systems

With the surface Navy getting new ships and new ship types, it is logical to assume that new weapons systems are also on the horizon. They are. Here is what VADM Price had to say on that subject:

"Upgrading of ships' weapons systems has too often been done on an urgent equipment basis with too little thought about the overall ship as a combat system. Funding constraints aggravated by inflation, new threats and force reductions, are requiring us to get a significant improvement in effectiveness for the dollars we spend. In other words, anything we do must be shown to have an operational payoff in results attained or we cannot make a change. Improving, automating or integrating something such as a weapons system may be extremely desirable, but unless it detects or performs its mission significantly better, it cannot be accommodated. We must have a combination of the most effective weapons systems to accomplish the missions with the necessary combat direction system to tie the combat systems together.

"Emphasis in systems for upgrading ships will be in the following order: (1) active detection, (2) hard kill weaponry and (3) electronic warfare (all tied together by the combat system).

- "*In the active detection* fields, including both 3-D and 2-D radars, we are moving in three primary areas: improved reliability and availability, better performance in clutter and jamming, and automation, that is, automatic detection and tracking systems.
- "*In weaponry* we are concentrating on the effectiveness and timely delivery of explosive ordnance on target. This effort includes countering air and surface threats at all ranges of interest.

Examples of weapons under development, or in being, to perform parts of this wide task include the following:

- Standard Missile Two, for its long range, will be used for surface-to-air engagement.
- *Harpoon* will serve a similar task in surface warfare.
- NATO *Seasparrow* whose mission is to counter air threats at close ranges.
- CIWS (Close in Weapons System) for a terminal defense counter to the air threat.
- Larger caliber naval guns for primary employment against surface and shore targets.

"Most important, however, is the combat systems concept whereby the weapon and its dedicated fire control system is effectively interfaced with an adequate sensor, permitting timely target detection, track, identification and weapon engagement.

- "*In electronic warfare* our modernization program features improved reliability and increased frequency coverage.
- "*In the area of combat systems*, the requirement to upgrade is being driven by the extremely short reponse times necessary to meet the threats projected for the 1980s. The addition of new weapons systems on some of our smaller ships requires that we improve their capabilities and additionally improve the communications systems used to coordinate the computers among ships and aircraft."

One other important new weapons system remains to be mentioned—LAMPS. According to VADM Price, "LAMPS, the Light Airborne Multi-Purpose System, is a program with a great future. In ASW, the LAMPS MK I has proven to be a reliable and impressive system."

A shipboard helicopter is nothing new; the helicopter has been in the fleet for two decades. However, when the speedy, versatile, manned helicopter and the durable, multipurpose destroyer are combined, a new team of great significance is born. That is the essence of LAMPS.

Facing page: SES 100A. Above: USS Ortolan (ASR 22). Right: USS Douglas (PG 100).

The concept of manned helicopters operating off destroyers was evolved as a result of two concerns. First, the ability of submarines to launch offensive weapons beyond the sensor range of our destroyer detection systems, combined with the limited range our destroyers were capable of delivering an ASW weapon, required a system that could detect, classify and attack submerged submarines whose presence had been established by other means.

Second, employment of the cruise missile as an antiship weapon emphasized the need for a system that would provide increased warning of an attack, and provide countermeasures against an incoming missile.

From these two concerns evolved the concept of the LAMPS. This revolutionary tactical system is a major step forward in the Navy's continuing attempts at improved capability. LAMPS presents a unique and important advantage to the destroyer by extending her detec-

SWOSCOLCOM

Produces The Well-Rounded Surface Warfare Officer

Last November the surface warfare officer's status was upgraded by the creation and authorization to wear the distinctive new SWO breast insignia. A number of other changes affecting his status have also taken place recently.

The SWO school (SWOS) which was established as a pilot program at Newport, R. I., in 1970 was expanded from a five-week course to a 15-week course, and a new one was opened at Coronado, Calif. On 1 Jan 1975 the SWOS and the Anti-Submarine Warfare (ASW) Officer School at Newport were transferred to the Destroyer School. The Destroyer School was then redesignated as the Surface Warfare Officers School Command (SWOSCOLCOM) to provide centralized SWO training. The SWOSCOLCOM has four separate schools now: A revised PCO/PXO course now entitled Command and Tactics School; the present Department Head level school; an ASW Officer School; and an entry level professional Surface Warfare Officers School.

The SWOS at Coronado will become a detachment of the new SWOSCOLCOM at Newport, with its officer-in-charge reporting to Newport's commanding officer. The detachment will remain at Coronado.

The goal of the entry level course is to train junior officers so that they can be fully productive from the moment they board their first ship. The curriculum at the school leans heavily on practical work and focuses on knowledge required by the junior surface warfare tion capability to approximately 100 miles. Not only can the LAMPS-equipped destroyer deliver weapons to the range of her sensor detection capability, but LAMPS has extended the destroyer's detection capability.

VADM Price continues: "Since September 1971 we have had 38 detachments deployed in both Pac and Lant Fleets. The modification of both ships and aircraft is proceeding on schedule; 58 of the 72 ships are complete, and 79 of the 105 SH-2s have been modified.

"The LAMPS squadron personnel situation is still not what we would like. Billets have been established and the squadrons are getting people. But, because this is a new program, they are inexperienced.

"While the MK I LAMPS is performing well and changes are being made to improve its operational capability, major system improvements must await introduction of the follow-on MK III LAMPS. The development effort is now concentrated on avionics, shipboard electronics and the software required for total system integration. A new airframe selection is still two years away.

"The follow-on system will employ a more modern airframe capability of greater ranges and endurance, and it will be more easily maintained aboard ship."

As VADM Price's remarks clearly note, the surface Navy of today is modernizing at a fast pace. It won't replace the submarine or air navies, and isn't meant to; for an effective, modern Navy must operate above, below and on the surface as a team. The new surface Navy, however, in this, its 200th year, is building on its proud traditions and enjoying new prestige as it offers the sea-going sailor a varied and challenging career. It is, in short, an exciting place to be nowadays.

JO1 Tom Jansing, USN

Facing page top: First nuclear-powered task force, from left to right are guided missile frigate Bainbridge, attack carrier Enterprise and guided missile cruiser Long Beach. Facing page bottom: In formation off Hawaii, from the foreground, are: USS Cochrane (DDG 21), USS Benjamin Stoddert (DDG 22), USS Rathburne (DE 1057) and USS Whipple (DE 1062). Top: Aegis weapon system test-fired from USS Norton Sound (AVM 1). Above: (Firing of Harpoon antiship missile.

officer in fulfilling his role as junior officer of the watch, CIC watch officer and division officer. The curriculum includes, among others, antisubmarine warfare, electronic warfare, surface warfare, anti-air warfare, engineering, damage control, bridge duties and detailed division officer management—all designed to increase professionalism.

This spring, surface warfare officer professional qualification standards (SWO PQS) will be distributed and will be utilized by all officers seeking designation as a qualified surface warfare officer. The SWO PQS will replace the present joint CINCPACFLT CINCLANTFLT Instruction 1412.1 series.

Other changes in the SWO program include the conversion of over 350 sea billets from lieutenant to lieutenant (jg) and the revision of SWO community accession rates, retention goals, career patterns and community entry/exit policies. The sea billet conversions are intended to provide an opportunity for upgrading the duties and responsibilities of many qualified junior officers.

In addition, procedures similar to those for achieving "Qualified for Command" status in the cruiser-destroyer type forces are being made requirements for such status in all surface warfare commander commands. To achieve the "Qualified for Command" status, an officer must now meet four basic requirement:

- Serve at least 48 months in a ship or afloat staff, at least 24 of which are in a commissioned ship.
- Serve in the ship from which application is made for at least 12 months in the rank of lieutenant as head of a department or executive officer, or in the rank of lieutenant commander, with consistently outstanding performance.
- Successfully complete a comprehensive formal written and practical exam as administered by a command qualification board convened in accordance with the type commander's instructions.
- Demonstrate qualities of professional competence, leadership, endurance and high personal and ethical character to the degree that the commander is willing to allow the officer to take command of a ship in his unit, with complete confidence, should circumstances so require.

All these changes are designed to assist surface warfare officers to expand their knowledge and better equip themselves to meet the administrative and operational challenges in the highly sophisticated and modernized Fleet of today, while preparing them for the even more demanding and exciting prospects of the future.

Launching Of The Nuclear-Powered Guided Missile Frigate

USS VIRGINIA

As the band played "Anchors Aweigh," the eighth American warship to bear the name of the Commonwealth of Virginia slid down shipway eight into the James River shortly after noon on Saturday, 14 December.

The 585-foot, 11,000-ton nuclear-powered frigate *Virginia* (DLGN 38) is the lead ship of a new class of vessels designed to provide antiaircraft and antisubmarine protection to a carrier task group. The nation's fifth nuclear frigate, sources estimated her cost at $297.2 million, not including outfitting and postdelivery work.

Preceding the launching, Secretary of the Navy J. William Middendorf II noted that the U.S. Fleet today consists of around 500 ships. He said before 1968, the U. S. was programming 50 ships a year; now we're down to 13.

"In the face of the Soviet naval buildup . . .," he

KITCHEN

... and in the COMMUNITY

Note to Navy wives: The next time you get up on a pleasant Monday morning to start your day by preparing a school lunch for your youngsters, then cooking a nice breakfast of ham and eggs while you listen to your portable kitchen radio, the chances are that you will be enjoying the use of one or more products that are a spinoff of naval research.

A spinoff is "something extra," a by-product, perhaps, or a new application of scientific research that started off for a very different purpose.

Research is the ever-important tool of progress. In the seagoing Navy, for example, without research we might still be using sail and be dependent on the stars alone to navigate our ships.

Few people, however, give much thought to the spinoffs of naval research, often in partnership or teamwork with research in industry. These by-products come to the aid of the American housewife and contribute to the well-being of the whole community. They may end up in such unexpected fields as the kitchen, the rec room and even child rearing, to mention a few areas, to say nothing of the advancements in medical care.

Here is a rundown on several of the lesser known fruits of research in which Navy played a role and how it came about. Let's start off with the examples mentioned in the paragraph above.

If you ever wondered how you got along without that thin plastic bag which wraps the sandwich in your son's school lunch bag (not to mention almost everything in the grocery store), you can reflect that you might not have had it at all had not the Office of Naval Research been working on a program in 1946 which called for the use of balloons capable of reaching great heights.

ONR wanted to do research in the upper atmosphere. Trouble was, the rubber balloons used before World War II were too heavy. Plastic balloons, however, showed promise, and research was begun to develop plastics sufficiently strong, thin and pliable to do the job. They were developed through ONR-sponsored research. Spinoff result: A film that not only solved the balloon problem, but also launched an entire era of transparent plastic packaging which keeps food fresh and clean in the supermarket.

Now for that breakfast of ham and eggs. Each time those eggs slip smoothly from the skillet onto a plate, the chef can thank a combination of industrial and naval research for pointing the way to the development of the Teflon frying pan. The Navy didn't invent polytetrafluoroethylene (it was discovered by DuPont), but the Navy did give it the employment that pointed up its potentialities. The Naval Research Laboratory had been searching for a material that could be coated on

NAVY in the KITCHEN

FTINGGGGGGGGGGG..

rifles and ammunition to keep them lubricated for months in all kinds of weather. Industrial scientists felt the substance could be useful but really weren't sure what it could be used for.

Navy scientists experimented with the material and found that, by spraying a thin film of polytetrafluoroethylene on metal, then heating it in a very hot oven, they could lubricate the metal for an almost indefinite period of time. This discovery, of course, saved untold manhours as well as eliminated the necessity of carrying quantities of lubricants in ships. The new substance could be coated over many moving parts in hard-to-reach places, serving as lubrication. On submarines alone, this saved much time, and the substitution of Teflon for large quantities of oil and grease and other lubricants also saved many pounds of weight.

Years later (after studies to prove it would not adversely affect food), Teflon joined the family of home cookware.

Now—something for the Navy junior, and the rest of the younger generation.

The ubiquitous transistor which, among other things, has put a radio in almost every teen-ager's hip pocket, is a product of basic research in solid state physics to which the Office of Naval Research made a major contribution.

The Navy, of course, wasn't particularly interested in producing a durable radio that could be thrown into the back seat and taken to the beach. It was, however, intent upon reducing bulky equipment aboard ship and holding repairs at sea to a minimum. The Navy, therefore, was particularly anxious to push research that replaced vacuum tubes with tiny bits of material which now do the same job with much less trouble.

Research in solid state physics, which was a major effort of ONR some 15 years ago, in improving communications with smaller and better equipment, has been followed by even more intricate and miniaturized marvels in the field of electronics, some of which you can expect to find in your home in the not-too-distant future.

If your charge account has ever been fouled up by a computer, you may or may not thank the Office of Naval Research, plus the Navy's Ordnance Systems Command (now, along with the Naval Ship Systems Command merged into a single organization known as the Naval Sea Systems Command) for this one, but the fact remains that the military services—along with industry and university scientists, of course—have made a major contribution to the computer age. They have, for example, contributed to research which made possible the magnetic core ferrite storage units now widely used in most computers.

Again the needs of ships at sea produced a strong reason for initial research. A variety of information must frequently be produced rapidly at sea so a ship will know how to maneuver and employ its weapons in case of sudden attack. Such information had to be displayed in ways that are easy to read and understand. Computers were the answer.

Although the day of the home computer hasn't exactly come into its own, in times not too far distant, every family may have one with which to plan the budget for the next 10 years; figure out how long the kids' shoes will last; or provide a list of people to whom Christmas cards should be sent. Computers already

touch the everyday lives of Navy families, sometimes in ways which they don't even realize.

Next—there may be something in the future of every automobile owner to help ease the task of keeping his car looking beautiful.

An experimental coating under development for Navy aircraft providing a permanently waxed appearance may be just the answer. Scientists at the Naval Research Laboratory have been working on an easily cleaned, highly-resistant coating designed for aircraft, which has the ability to shed water like a freshly waxed surface. The coating has already been formulated in several colors, and has a high enough gloss to be attractive on car surfaces. If economically feasible, it could provide an easy-to-clean, permanently waxed finish for cars of the future.

CHOMP!
CHOMP!
GOBBLE!
CHOMP!
CHOMP!
BURP!
CHOMP!
SNORT!
GULP!
OIL!

Naval research has also played a prominent role in the maintenance of good health as well as the treatment of body damage and illness. The Navy is seeking methods of preserving, for extended periods, not only whole blood, but human tissue as well. A stock of human spare parts, in fact, is not out of the question. (See ALL HANDS, August 1969, p. 28.)

Parents concerned with their children's dental health should be happy to know that Navy researchers are investigating the possibility of further reducing cavities. In fact, ONR research has already produced a decay-preventing toothpaste containing trimetaphosphate. Another research project on cavities revealed some interesting facts concerning Navy recruits from parts of Ohio, South Carolina and Florida. They had no cavities whatsoever.

Fluoridated water undoubtedly helped but there was obviously more to it than that. The answer lay in food raised in the home areas from which these cavity-free men hailed. Certain chemicals in their native soil strongly inhibited the growth of cavities. Identification of all these chemicals could lead to a big step forward in eliminating the entire cavity problem.

And speaking of children, ONR research in human behavior turned up some information which has a bearing on understanding your kids. This research revealed that an only child or a firstborn child tends to be more insecure and more fearful than other children.

This isn't necessarily all bad because firstborns are also frequently more intelligent. They strive harder to overcome their anxieties, volunteer for difficult tasks and achieve greater success than later-born children. ONR discovered, for example, that these qualities existed while testing pioneering *Sealab* aquanauts who lived in an ocean habitat completely cut off from the world for two weeks.

One might expect naval research to be active in the ecological field, and it is. Under sponsorship of the Office of Naval Research, a scientist at Rutgers University has developed an "oleophilic" substance which, seeded on oil spills, is capable of eating away at oil. The substance acts as a fertilizer for the natural bacteria in oil and assists in its biodegradation.

Early in World War II, scientists at the Naval Research Laboratory, interested in surface phenomena, explored the possibility of using films of spreading agents on water to clear away oil from sinking ships. The project was abandoned but was revived in 1968 in response to international concern about oil pollution.

Biodegradable chemicals of only one-molecule thickness exert a lateral pressure on the surface of the water, forming a film which can be used to corral spilled oil films up to one-quarter of an inch thick. The oil, thus contained, can be removed by other means much more easily than if the oil remained dispersed.

The Navy also has sponsored the development of ocean data stations in projects such as NORPAX. This program is concerned with investigations of temperature anomalies in the North Pacific Ocean. These abnormal surface water temperatures are associated with changes in propagation of underwater sound, shifts of ocean and atmospheric circulation, changes in migration patterns of important commercial fishes and long-term changes in weather and climate over the North Pacific, the continental United States and perhaps the entire northern hemisphere.

The results of this research may make possible the prediction of weather conditions months in advance and will be of great importance to agriculture, commercial fishing, shipping, transportation, recreation and other activities besides the Navy.

These are only a few ways in which Naval Research has contributed to activities which are in no way Navy related. Nevertheless, they make life a little more pleasant for everybody. If the past is a guide, it seems safe to predict that Naval Research spinoffs can continue to improve life in the kitchen, and the community, as well as life on the high seas.

Navy Juniors - Navy Seniors

A TEAM OPERATION

CAMPOREE

Keep it simple, make it fun, and there was evidence that almost 200 cub scouts and boy scouts, and their fathers—most of whom were either Navymen or dependents—had their share of fun at a recent father-son camporee held at Charleston, S. C.

They occupied their time by pitching tents and making camp, practicing knot-tying for an afternoon contest, stirring catfish stew, wrapping hamburger patties in foil to cook on the coals, whittling marshmallow sticks, learning to build a campfire, hauling water from the pump and washing dishes. Maybe washing dishes isn't fun, but the 10-year-olds still fought each other to get their turn at the sink.

The emphasis in scouting today seems to be "let the boys do it themselves," in contrast with days gone by when the scoutmaster decided everything from what was to be cooked for breakfast, lunch and dinner, to who would do the actual cooking and cleaning up. Today the boys plan the menus and activities, and do all the chores. The scoutmaster is there mainly to answer questions, make suggestions and ensure safety.

A number of the 17 packs pitching their tents at Camp Gregg in Charleston were composed of sons of military personnel, like Pack 453, sponsored by the Charleston Naval Weapons Station.

Radioman 1st Warren Kelly of the Fleet Mine Warfare Training Center and district commissioner for cub scouting, noted, "The military, generally, support all the youth programs. Now they may not be able to do this with cash, but they do it with leadership and participation."

In particular, Kelly cites Charleston's Special Services which supplied much of the camping gear and many sleeping bags for the campouts.

"They just have bent over backwards for us," he said.

Electrician's Mate 1st Neil Woods, a drug abuse education specialist aboard USS *Orion*, acted as camp director for this particular camporee. It's his firm belief there is quite a bit of enthusiasm on the part of the military in the Charleston area.

"The staff provides a corpsman to be at the campsite who is equipped with the proper supplies to treat anything from bee stings to God knows what," he said. "And the corpsman has a direct line to the dispensary. The cooperation we have received from the Navy is fantastic."

The campers were naturally reluctant to pull up the tent stakes and roll up sleeping bags when the Sunday morning church services concluded a glorious outdoor weekend with Dad. Wood said, "What really makes it all worthwhile is when some little guy comes up and says, 'Hey, when are we going camping again?' "

—Story by PH3 Patti Phillips
—Photos by PH1 Milt Putnam and PH3 Phillips

Facing page: Webelo Ron Knight, under the supervision of Den Leader FTB1 Bob Grabowski, carefully stirs the campfire. Above: Cub Scouts Franklin Pajaro (left) and David White help Scout Chris Christensen place the American flag at their weekend campsite. Below: The chore of cutting firewood fell to Scout Leader TM2 Ken Murry and Mike Zarzycki.

Reflection

Making a Record Album

An event to remember happened in London, England, when 40 singing teenagers, calling themselves Reflection, cut a stereo album and premiered it in less than two months.

The youngsters, sons and daughters of U. S. military parents living in the city, are members of the Protestant Chapel at the Air Force's facility at West Ruislip.

The anxious teens and their sponsors premiered the album in the chapel for a crowd of more than 100 Sunday worshipers, some of whom had invested in the project. The record featured youth gospel songs and some secular tunes, including Day by Day from the musical, Godspell.

The long-awaited premiere had its beginnings a year ago when Senior Chief Data Processing Technician Jim Scott and his wife, Sharon, decided to volunteer their musical and organizational talents to form a teen choir in the chapel. According to Jim, the teens could enjoy choral singing while at the same time fulfilling their spiritual obligations.

The first get-together was disheartening, only eight youngsters turned out; the second drew only five.

If Jim and Sharon were discouraged, it was not evident. With him on bass, and her arranging and playing the piano, they persisted.

In spite of many military transfers last summer that affected the group, they decided to push ahead with ambitious projects that included more performances and the production of an LP album.

While Jim investigated recording studios, pressing firms, label printers and other esoteric aspects of the recording industry, the steering committee approached the parents of members. It was estimated that an initial run of 500 records could be produced at nominal cost.

Several months later, the group assembled at a studio to record the master tape.

For even a professional group to record 12 numbers to commercial standards in one day is almost impossible. For an amateur group, arriving at the studio at noon—after a three-hour bus ride and having been up since 0500—it would take a miracle. So they did it.

Then came the waiting. The edited master tape was available in a week; the next week the master disc was cut. There were album jackets to be printed, and labels. The first batch of labels were flawed and had to be done over. Since the label is pressed into the album, the pressing was delayed.

For each step of the process, a different company was involved. Jim was on the phone daily, checking, monitoring, cajoling, and coordinating. Timing was important, as the group had originally promised the album by Christmas.

Finally, in late November, the finished product was ready. In spite of their own impatience, the Scotts and the committee decided that rather than release the album in bits and pieces they would delay until Sunday, 1 December.

Facing page top: Led by soloists Ann Harris and Rich Haislip, "Reflection" performs in the West Ruislip Chapel. Bottom: Youthful face in the group during a performance. Right: Sales of the album were successful after its premiere at West Ruislip. Below: Jim and Sharon Scott go over music scores used by "Reflection."

"Our premiere was a success," said Jim. "We sold over half the albums and have now paid back our investors."

The story of Reflection does not end here. Plans are being made for more appearances, possibly including a tour of bases on the Continent next summer. A second run of the album, or even a "Volume II" is contemplated. Cassettes are another future possibility, as are radio and television appearances.

—Story by CDR L. M. Stevenson, USN
—Photos by JOCM Bill Weesner, USN

Littlest Swimmer

"Kick harder, Kathy, kick!" Coach Stringer paces the deck in front of the pool, observing this swimmer's stroking or that swimmer's breathing. "Let's go, people. C'mon, let's go!"

He interrupts his pacing and waits for all the swimmers to form up against the bulkhead. "Two laps, free-style."

His whistle gave off a sharp, piercing pitch, and the first round of swimmers leaves the pool's edge. Seconds later, another sharp sound and the second group is off.

Hanging onto the pool's edge, poised for action, a young girl waits, her blonde hair dripping, her green eyes large and anxious. Her face is childish, but intent.

Above: Kathy Otis, smallest member of the Pensacola Navy Swim Team. Right: A styrofoam board frees Kathy's arms, allowing her to concentrate on various leg kicks. Far right: Kathy receives encouragement from Coach Jim Stringer.

The whistle sounds and the little girl leaves the poolside and swims towards the deep end. She's so small! But, she not only reaches the far side of the pool, she turns and swims back toward her starting point. Observers expect her to stop and come up puffing. Without slowing, she turns again and goes on to swim the same number of laps as her teammates.

Kathryn Santa Maria Otis, age six, daughter of Lieutenant Commander and Mrs. Philip Otis, is the smallest and youngest member of the Pensacola Navy Swim Team. She, along with her older brother and sister, practices one hour each night, five nights a week at NAS Pensacola's Training Tank.

For two years Kathy had wanted to join the swim team, but her parents felt that, at four years of age, she was just too young. This past summer she finally became a team member.

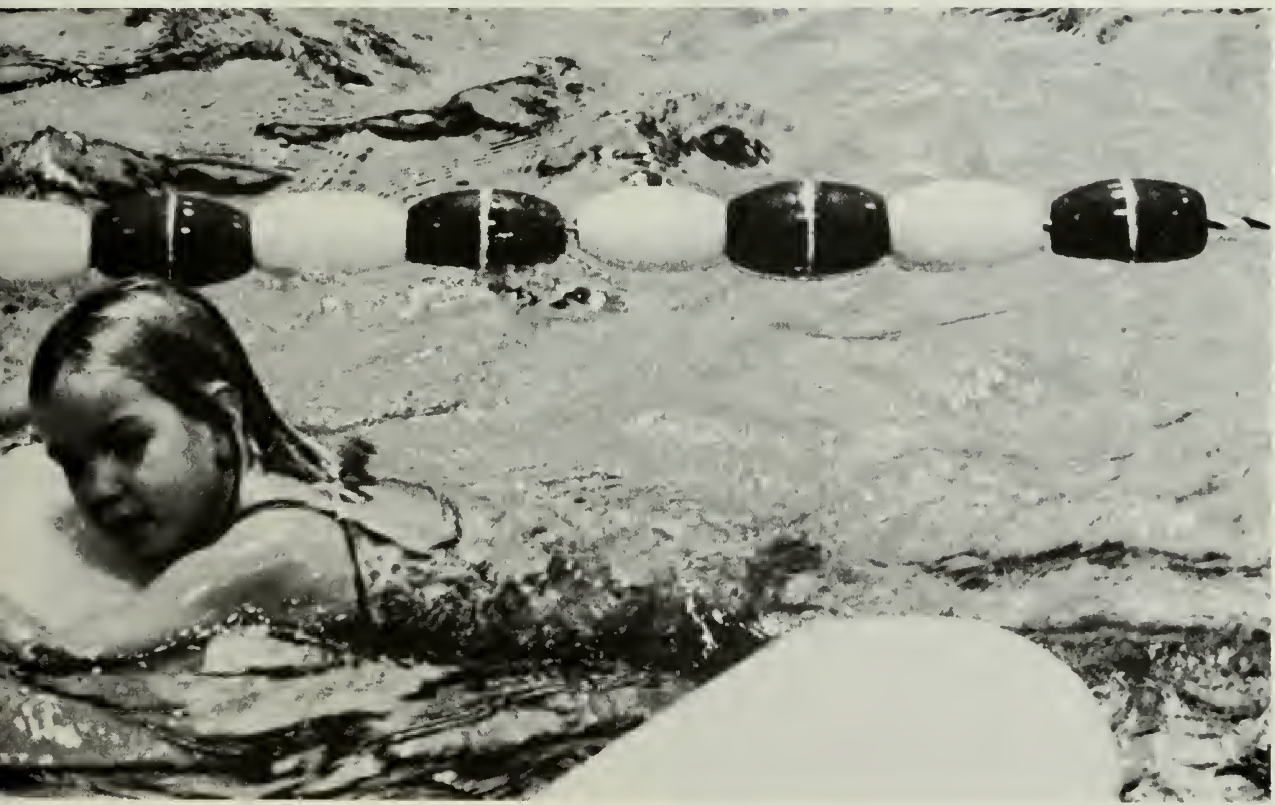
Kathy has never had a fear of the water. In fact, according to her parents, she had to be watched very carefully as a baby whenever she was around water—otherwise, she was very likely to jump in, clothes and all.

Working hard, drilling, conditioning herself, Kathy looks forward to participating in the team's first squad meet—the competition between the Blue and Gold teams.

And so, with the whistle, she's off once more, swimming toward that far side. In the next lane, a youngster works to stay ahead of Kathy, works to reach and touch the bulkhead before she does. A race is on.

"C'mon Kathy. Kick harder, girl, kick!"

—Story and photos by PH3 Patti Phillips



ALL-NAVY TALENT CONTEST

It's because of a 1950s television show that Machinist's Mate 1st Class Jim Berry learned to mimic a trumpet and it was partly because of his jazz-style trumpet interlude in contemporary versions of two American classics that Berry won the 1974 All-Navy Talent Contest.

"I was about 12 when there was a performer on a TV show who could hum and whistle at the same time. I thought it was neat," Berry said.

"The next thing I knew, I had developed this horn thing."

He spent a few years honing his horn skills while performing in piano bars and in the submarines in which the 13-year Navy veteran has served. That talent, added to his own arrangements of Battle Hymn of the Republic and Dixie, led him through the Third Naval District regionals to the 1974 All-Navy Contest in November at the San Diego Naval Training Center.

The Battle Hymn, he said, grabs the attention of one segment of any audience and Dixie brings along the other part. That's apparently what happened when Berry received the highest score from the packed audience on strategically placed applause meters in the training center's Luce Auditorium.

However, representatives from the sponsoring Bureau of Naval Personnel and the Naval Training Center, who averaged applause meter readings after each act and at a show's-end encore, had to split decimal points to determine the winner. Top three winners were Berry, a song-and-dance group called Toe Back, and Seaman Robert B. Johnson.

Toe Back, whose animated soul routine boosted Seamen Anuel Cannada, Marion L., Allen and Josanna Tyson through the Eleventh Naval District talent regionals to the All-Navy, also won the Chief of Naval Personnel's special award recognizing ethnic entertainment.

Seaman Johnson of USS *Oklahoma*, who represented Commander Naval Forces Japan, sang contemporary renditions of Ain't No Sunshine and the theme from the motion picture, Love Story.

But there were other high-scoring acts, too. Berry said backstage, moments after he received his trophy, "There wasn't an act here that couldn't go professional tomorrow."

In fact, a few were professional. For example, Yeoman Seaman Bob Brown's pantomime of Sammy Davis, Jr.'s Mr. Bojangles, reflected the artistry he used to become the New York stage's top newcomer in 1972 during his pre-Navy days (see ALL HANDS, October 1974, page 53). And there was Communications Technician 2nd William Morris, whose rendition of the country-western classic Auctioneer Song reflected his days on television programs hosted by Red Foley. The Auctioneer drew an enthusiastic response from the audience.

There were other fine acts—Signalman 1st Richard Santos reflected his Hawaiian heritage in singing the Hawaiian Wedding Song as he strummed his ukulele. Lieutenant Commander Neil Dalager—who participated in a Navy talent contest 18 years ago—performed the same routine he used 'way back then by singing September in the Rain, Pennies from Heaven, and Almost Like Being in Love.

Then there was the Navy newspaper editor from the Twelfth Naval District, Radioman 2nd Dan Kelley, who

Facing page top: Signalman 2nd Class Richard Santos, 1st ND, sings "Hawaiian Wedding Song." Bottom: Third place winner, Seaman Bob Johnson, representing Naval Forces, Japan, sings "Ain't No Sunshine." Above: The winner was Machinist's Mate 1st Class Jim Berry, representing the 3rd ND. Right: Second place award and special BuPers ethnic entertainment award went to 11th ND entry, "Toe Back," left to right, SA Anuel Cannada, SN Marion Allen, and SN Josanna Tyson.

transformed himself into Jackie "Moms" Mabley for a five-minute routine. And Communications Technician 3rd Paul Ruby, who became Tevye, the milkman in Fiddler on the Roof. Also, Personnelman Seaman David Johnson and Air Controlman 3rd Charles Ohl, in separate acts, sang their own compositions.

A vocal trio called Fifth Street also performed—in that act were Tradevman 2nd Thomas P. Davis, Aviation Machinist's Mate 2nd James J. Miller and Personnelman 2nd Robert W. Schuck.

Included in the 18 acts were four separate vocalist-guitarists—Chief Storekeeper Cecil R. Smith, Constructionman Gary C. Roper, Radioman Seaman Frank J. Urban, II, and Storekeeper 3rd Class Karen F. Barnes.

Completing the acts were vocalist Commissaryman 1st Class Pedro C. Layson, and a country-western duo featuring Aviation Machinist's Mate 3rd Robert W. Abendschan and Carol S. (Wyndi) Warren.

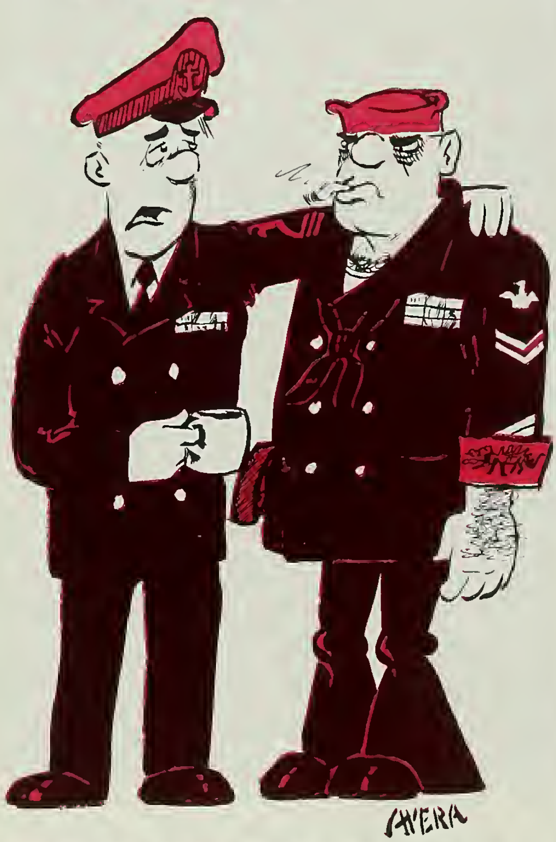
None of the acts which finished out of the money at the talent contest really felt they had lost. Each received a free week's stay in San Diego, interspersed with a banquet and tours of area attractions, along with rehearsals. So, a good time was had by all, audience and performers alike.

—Story by JO2 Rex Wilson
—Photos by PH2 Douglas Cunningham

Facing page left: LCDR Neil Dalager, 14th ND, performed the same tunes he used in a Navy Talent Contest 18 years ago. Left: Pedro Layson, a commissaryman 1st class representing the 13th ND, sings "The Impossible Dream." Below: Communications Technician Paul Ruby, 9th ND, becomes Tevye, the milkman from "Fiddler on the Roof." Right: SN Karen Barnes, 8th ND, sings "I Don't Know How to Love Him" from the musical "Jesus Christ, Superstar."

ALL NAVY CARTOON CONTEST

1st Place—YNCS Gerald M. Avera



"Phasing into the new uniform is just not your bag, is it, Boats?"

Just like the car rental agency that tries harder because it's number two, so YNCS Gerald M. Avera had to try harder. In the last All-Navy Cartoon Contest, Avera placed second and seventh. Trying harder paid off because he swept the 1974 competition, winning both first and second places.

Avera's "new uniform" cartoon was chosen the best out of 185 entries submitted by active-duty Navy people. The top winning cartoons in the 19th annual competition appear on this and the following pages.

For his extra efforts, Avera, assigned to Chief of Naval Technical Training, NAS Memphis, receives two original "Half Hitch" cartoon strips donated by ex-Navyman Hank Ketcham.

Other top Navy winners received an award certificate. They include:

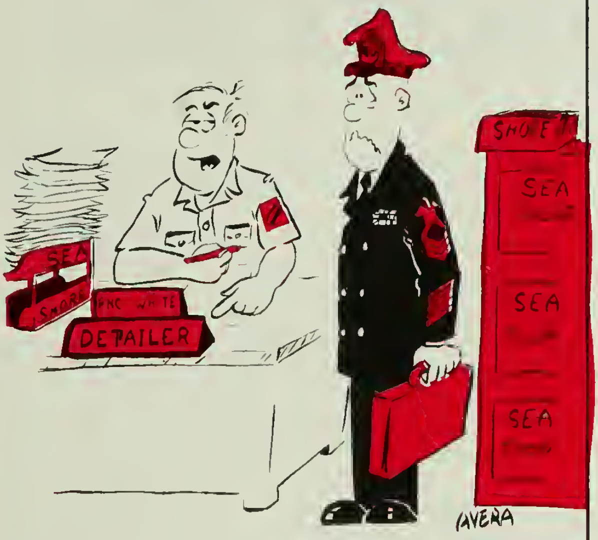
Third place—PHAN Edward L. Stubler, Naval Intelligence Support Center, Suitland, Md.

Fourth place—JOC Sam E. McCrum, Naval Recruiting District, Glenview, Ill.

Fifth place—CTASN Robert E. Hobbs, Jr., Naval Security Station, Washington, D. C.

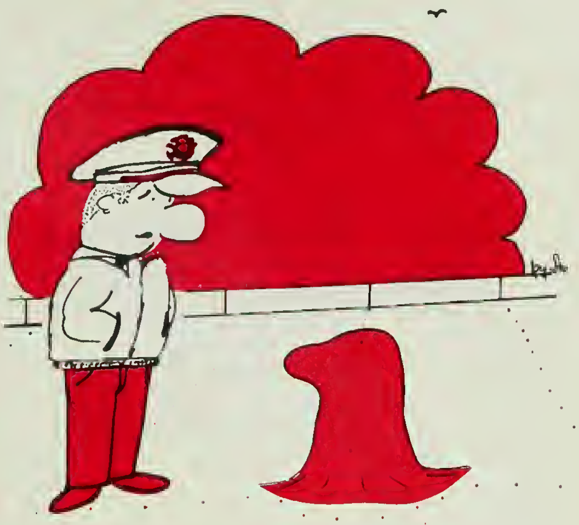
In addition to these, there were five honorable mention winners, one of whom, CTASN Hobbs, also placed among the top five winners. The other honorable mentions include HMC George P. Brines, NAS Moffett Field, Calif., last year's top winner; AN Robert W. Norman, Naval Weapons Center, China Lake, Calif.;

2nd Place—YNCS Gerald M. Avera



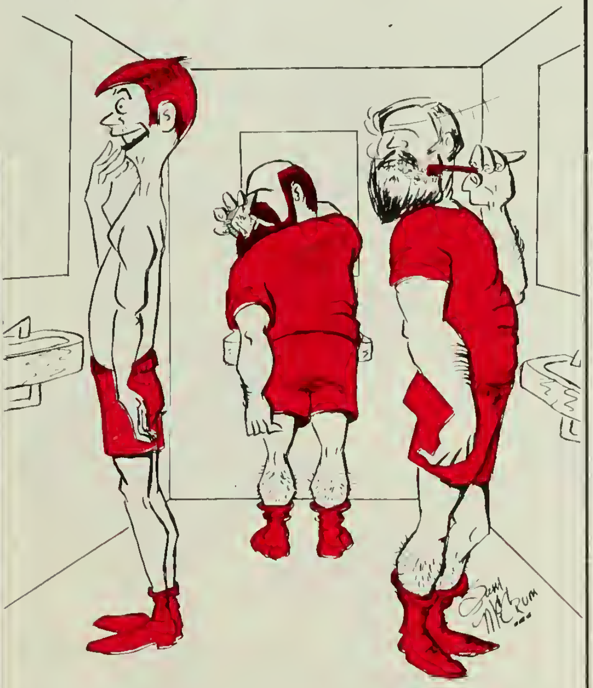
"What can I do for you, buddy? He's on 30 days' leave and I have the conn."

3rd Place—PHAN Edward L. Stubler



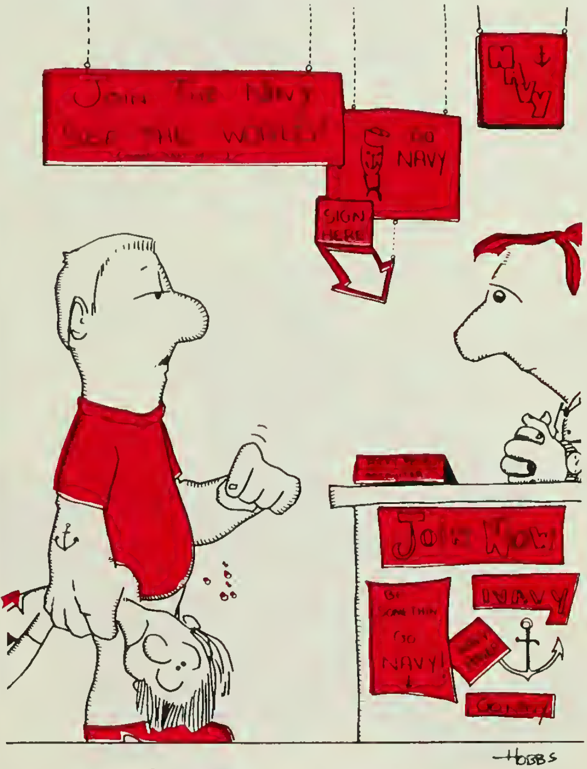
"Pushed the eject button in the hangar deck again, eh, Harrison?"

4th Place—JOC Sam E. McCrum



"Man, I can't wait till we get back to the States and my girl gets a load of this beard."

5th Place—CTASN Robert E. Hobbs, Jr.



"My son says he wants to join."

honorable mentions...

CTA1 Donald L. Winans, Naval Security Group, San Vito; and DK2 Nemesio D. Hernandez, USS *Myles C. Fox* (DD 829).

A girl and a boy took top honors in the dependents' contest. The girl, Alice A. Gibilaro, whose father, RM1 L. E. Gibilaro, is stationed at Charleston, S. C., won first prize. She too will receive an original "Half Hitch" cartoon strip. Runner-up to Alice was Bernie Kellish, a dependent of ETCS B. R. Kellish, stationed aboard Mobile Ordnance Technical Unit 13.

Since its beginning 20 years ago, the All-Navy Cartoon Contest has been sponsored by the Special Services Division of the Bureau of Naval Personnel. Next year's contest, however, will be sponsored by the Navy Internal Relations Activity, of which ALL HANDS is a part. Winners will be selected by a panel of impartial judges appointed by NIRA.

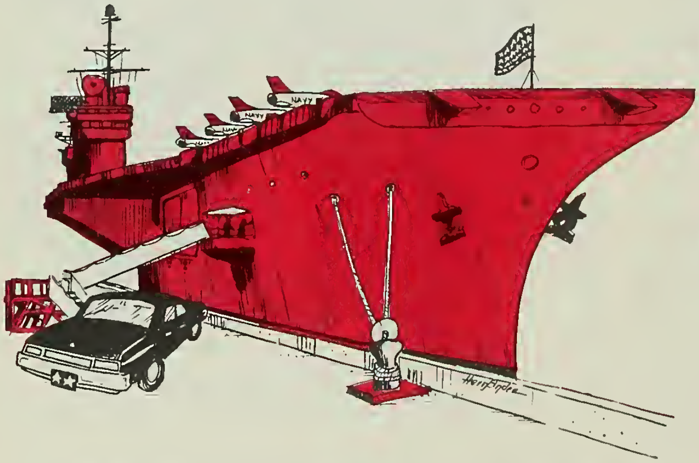
AOCAN Robert W. Norman

"Hey, Ralph, the shark repellent is working real good. Ralph . . . hey, Ralph . . ."

HMC George P. Brines

"Son, I'm afraid your cymbal playing days are over."

DK2 Nemesio D. Hernandez



". . . will the owner of a Ford, black, with two stars on the license plate, please remove same from the pier . . ."

CTA1 Donald L. Winans

"Marry me and I guarantee in six months you'll be Navy 'Wife of the Year.'"

Despite the new sponsor, rules for the 1975 contest will remain the same. All Navy personnel on active duty in excess of 90 days, and their dependents, may participate. You may enter as many cartoons as desired, but each must portray a Navy theme. Each drawing should be in black ink on 8 x 10½-inch paper or illustration board so that the cartoon may be reproduced for publication. Remember, even though your cartoon may not win a prize, it may still be used in ALL HANDS or various other news media. The deadline for this year's contest is 1 October. See future Navy News Briefs and CHINFONOTE 1700, to be issued later, for details on this year's upcoming cartoon contest.

In addition to awards for the best active duty and dependents' entries, a special award will be given this year to the best Bicentennial-oriented cartoon relating to the Navy's role in our nation's 200-year history.

Robert E. Hobbs, Jr.

MON
23
OOOOOH! ALREADY I CAN SEE TODAY IS GOING TO BE DIFFICULT!
HOBBS

dependents...

1st (Dependents)—Alice A. Gibilaro

"All I said was . . . the only good marine was a . . . ahh . . . sub . . . marine."

2nd (Dependents)—Bernie Kellish

"Hey, Fred, pull over. I think we have a flat!"

STATE INCOME

. . . Information YOU need to know

Navy men and women seldom neglect to file their Federal Income Tax forms by the 15 April deadline. Some, however, may not be aware that it is their personal responsibility to file necessary forms and pay state and local taxes due their state of legal domicile.

According to a recent Judge Advocate General (JAG) instruction, the income-taxing states are now making a concerted drive to locate delinquent taxpayers and are imposing penalties for failure to file and pay appropriate state taxes.

The Navy sends copies of Wage and Tax Statements, IRS Form W-2, to states (and cities if applicable) which members have indicated to be their domicile, except while on sea duty, or while stationed outside the United States and the District of Columbia. If no domicile is indicated in a member's record, the statement is sent to the state where he is stationed.

Navy men and women are protected from taxation from both their state of domicile and the state where they are stationed by the Soldiers' and Sailors' Civil Relief Act. The act applies to military pay and any income derived from outside the state where serving.

If Navy people have income derived from a business, rental property, part-time employment—any money other than military pay, they may be required to pay state or local taxes to the jurisdiction where they earned the money, as well as to their state of legal domicile. Reciprocal credits may reduce any possible dual taxation.

A spouse's income, car and property may also be taxed under the law of the state where the member is stationed, because neither spouse nor children are covered by the Soldiers' and Sailors' Civil Relief Act.

A service member's home state might also tax a spouse's income but one can usually take advantage of reciprocal tax credit laws to avoid double taxation. In the event double taxation does occur, a legal officer should be consulted. He can suggest methods of avoiding double taxation or at least keeping it to a minimum.

The state in which a member is stationed has the right to know why income taxes are not being paid and to require proof that the service member is actually domiciled in another state, and thereby entitled to protection under the Soldiers' and Sailors' Civil Relief Act.

A voting record is the best proof that can be offered to support a claim of a domicile elsewhere. Whether or not the Navy man or woman is actually filing tax returns in another state, and otherwise assuming their obligations as a citizen, could be a matter for inquiry.

This year, several states have tax laws which are new or unusual and should be noted by Navy men and women who are domiciled in them.

- The following states do not impose individual income tax on residents: *Florida, Nevada, New Jersey, South Dakota, Texas, Washington,* and *Wyoming.*
- Several others do not tax active duty servicemen's pay. They are: *Alaska, California* (if stationed on permanent duty outside the state), *Idaho* (if full-time active duty for 120 consecutive days or more), *Illinois, Iowa* (all military pay excluded if on active duty for more than six continuous months), *Michigan* (all military pay subtracted on tax return), *Pennsylvania* (all military compensation earned out of the state is exempt), and *Vermont* (all active duty military pay is exempt).
- Some significant changes made in state tax laws in 1974 are:

Arkansas—Minimum income necessary for filing has been increased; military persons must file a return even though no actual tax is due. *Connecticut*—Tax on dividends has been repealed. *Florida*—Although it has no income tax, it does enforce an intangible personal property tax. *Hawaii*—Some tax credits have been repealed; an excise tax has been instituted. *Kansas*—Minimum income necessary for filing has been increased. *Kentucky*—Age limit for excluding military retirement income has been reduced to 50 vice 65. *Louisiana*—All exemptions from taxation of income earned outside the U. S., its territories and possessions, are terminated; personal exemption for deafness now applies to spouse and dependents, as well as taxpayer.

- Other changes are: *Maryland*—Totally disabled persons 65 or older have some exclusions from their pensions. *Massachusetts*—POW/MIAs have locally been granted some benefits. *Michigan*—Personal exemptions increased to $1500. *Missouri*—Established a new definition of "residents" for tax purposes. *Montana*—minimum income necessary for filing has increased; personal exemptions have increased to $650.

TAXES

now

Nebraska—Tax rate has decreased. *New York*—Assignment to government quarters is not controlling.

- Completing the list of changes:

North Carolina—Reductions for Retired Servicemen's Family Protection Plan and Survivor's Benefit Plan may be excluded. *Ohio*—Up to $4000 of retired military pay, regardless of age, is excludable. *Pennsylvania*—All military pay is exempt if earned outside the state. *South Carolina*—Pay of POW/MIAs is exempt. *West Virginia*—Living in government quarters does not disqualify one to claim he is a "nonresident." *Virginia*—Exclusions of retirement benefit have changed. *Wisconsin*—Minimum income necessary for filing has increased.

Following is a table which can be used to find out how much income must have been earned before a serviceman is required to file state taxes. It also furnishes information on personal exemptions, where to file, and tax exclusions and deferments for armed services personnel.

—JO2 Dan Wheeler

SUMMARY OF INCOME TAX LAWS OF STATES AND POSSESSIONS OF THE UNITED STATES

NOTE:

1. "Married couple" or "married" as used in this summary means husband and wife living together, except that in Arizona and California they may be living apart.
2. A married service man or woman is considered to be living with his or her spouse when separated only by reason of military orders.
3. Most states now have provisions for filing declarations and payment of *estimated* taxes.
4. The following states do not impose individual income taxes on residents generally: Florida, Nevada, New Jersey, South Dakota, Texas, Washington, and Wyoming. New Hampshire and New Jersey impose a "commuter tax."
5. Under section 513 of the Soldiers' and Sailors' Civil Relief Act (50 U.S.C. App. 573), a member may defer payment of taxes, without interest or penalty, until 6 months after discharge if ability to pay is materially impaired by reason of active service. Service in the combat zone, or missing status as a result thereof, may qualify as grounds for delayed payment of taxes. Returns must be filed on time, however.
6. Most states have provisions for extension of time for filing returns upon application by a taxpayer to the tax officials of his home state.
7. Various cities and municipalities levy a personal income tax. Where a question exists, each member should contact his home municipality to ascertain if he is liable for a tax.
8. Returns and payment of the tax are due on 15 April 1975 unless otherwise noted after the state's name.
9. In addition to the exemptions and credits listed in this summary, many states have provisions for persons who are blind or age 65 or older. If these apply to you or your spouse (or other dependents), check with income tax office of your state for further details.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
*ALABAMA:*** Net income of: $1500 if single, $3000 if married or head of family. Gross income of $3000	$1500 if single, $3000 if married or head of family, $300 for each dependent.	Alabama Department of Revenue, Income Tax Division, Montgomery, Ala. 36102	Effective 1 Jan 1965, all military pay for combat-zone service is exempt. See note below.

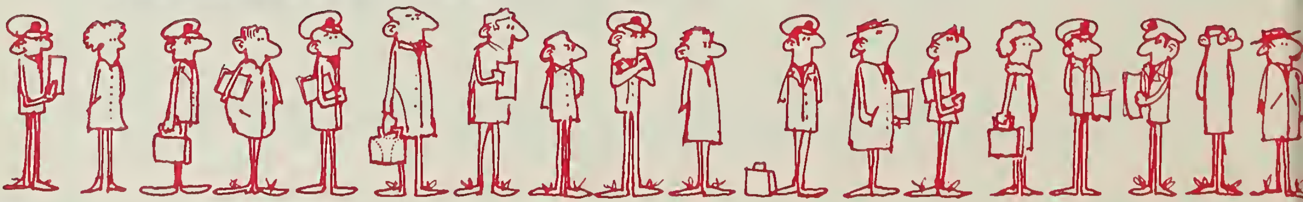
**NOTE: Members outside the United States may timely request an extension for filing, but with interest, until 30 days after return to the U. S. Consideration is given for waiving penalty for good cause.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
***ALASKA:* No Tax** Same as federal, if part of income comes from sources within the state. To file jointly, if wife has civilian income, serviceman must have civilian income of $600 or more.	Same as federal, except that part-year residents must prorate the exemption by the number of months physically present in Alaska.	Alaska Department of Revenue, State Office Bldg., Pouch SA, Juneau; Alaska 99801	All service pay is exempt after 1950. Same extensions as under federal.
ARIZONA: Net income of: $1000 if single, $2000 if married. Gross income of $5000.	$1000 if single; $2000 if married or head of household; $600 each dependent.	Arizona Department of Revenue, West Wing Capitol Building, Phoenix, Ariz. 85007	$1000 active-service pay, all mustering-out pay and all terminal-leave pay are exempt. Members outside CONUS may, without application, defer filing and paying, without interest or penalty, until 180 days after release or termination of present emergency, whichever is earlier. Disability retired pay is exempt.
ARKANSAS: (15 May due date) Gross income of: $3000 if single or separated from spouse, $4000 if married or head of family	Tax credit of: $17.50 if single, $35 if married or head of family, $6 for each dependent, $50 additional for mentally retarded child maintained in taxpayer's home.	State income Tax, Arkansas Revenue Department, P.O. Box 1,000, Little Rock, Ark. 72201	$6000 of service pay and allowances are excluded. $6000 of retired or disability pay is exempt.
CALIFORNIA:** Adjusted gross income over: $3250 if single or head of household, $6500 if married. Gross income of over $7000.	Tax Credits of: $25 if single, $50 if married or head of household, $8 for each dependent.	California Franchise Tax Board, Sacramento, Calif. 95867	$1000 service pay for active duty in excess of 90 days, all mustering-out pay and all terminal-leave pay are exempt. See note below for PCS outside Calif. Filing and paying deferred without application, penalty, or interest until 180 days after return to U. S. from duty outside 50 states. Combat-zone exclusion same as federal. Retired-pay exclusion of $1000. This exclusion is reduced if adjusted gross exceeds $15,000. Bonds and educational benefits under federal and state law are exempt.
COLORADO: Adjusted gross income exceeding $1750 if single, $2500 if married ($750) on separate returns), plus $750 for each taxpayer 65 or older.	$750 for each exemption, $7 food tax credit for each person allowed on federal return, $750 additional exemption for retarded dependent, plus low-income allowance.	Colorado Department of Revenue, 1375 Sherman Street, Denver, Colo. 80203	Same as federal, including combat-zone exclusion and postponement for filing and paying. $2000 of military-retired pay is excluded.
CONNECTICUT:** Net capital gains of $100.	$100 for each individual required to pay the tax.	Collections and Accounting Division, State Tax Department, Hartford, Conn. 06115	None. See note below for exemption of legal residents who satisfy all three conditions therein. No capital gain tax on sale of residence if 65 or older and resident of Connecticut for 5 years.

Military personnel are required to file a return if their gross income (before exclusion) exceeds the filing requirements, even though they may owe no actual tax.

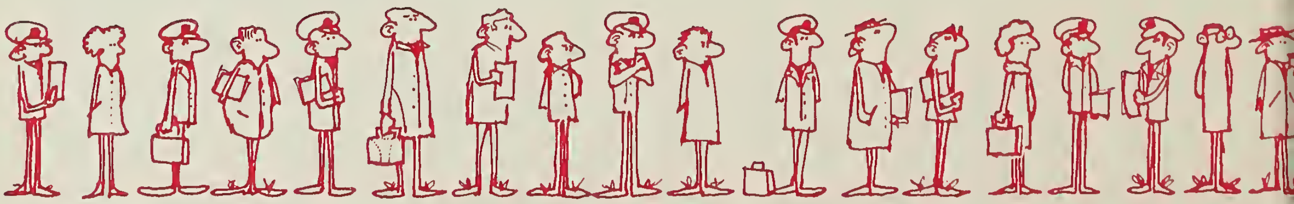
**NOTE: Domiciliaries of California on permanent duty outside the state are classified as non-residents, for that state's income tax purposes only, and need not file returns on income derived outside the state. If married and the wife remains in California, however, she would be taxable on one-half of their community income plus her separate income, if any.

**NOTE: Connecticut Regulations provide that an individual who maintains no permanent place of abode within the state, maintains a permanent place of abode elsewhere, and spends in the aggregate not more than 30 days of the taxable year in the state, shall be deemed not a resident.



Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
*DELAWARE:*** (30 April due date) If required to file a federal return or gross income of: $600 if single or separated from spouse, $1200 combined gross income of married couple.	$600 for taxpayer; $600 for spouse; $600 for each dependent.	Delaware Division of Revenue, 601 Delaware Avenue, Wilmington, Del. 19899	Same as federal, including combat-zone exclusion and postponement for filing and paying, effective 1 Jan 1967. See note below for exemption of legal residents. If killed while serving in a combat zone or dies as a result of wounds, disease or injury incurred in a combat zone, while on active duty, taxes will be canceled, abated or refunded.
**NOTE: Delaware Law provides in part, "Resident individual of this state means an individual who either: (1) is domiciled in this state for any part of the taxable year to the extent of the period of such domicile; or (2) maintains a place of abode in this state and spends an aggregate of more than 183 days of the taxable year in this state. A serviceman who maintains Delaware as his home state is considered a resident of Delaware and taxable in Delaware.			
DISTRICT OF COLUMBIA: Gross income of $1000 if single or separated from spouse, $2000 combined income of married couple.	$1000 if single or separated from spouse; $2000 if married; $1500 if head of family; $500 for each dependent; plus limited sales-tax credit.	District of Columbia, Department of Finance and Revenue, 300 Indiana Avenue, N.W., Washington, D. C. 20001	Same as federal re pensions or annuities for personal injuries or sickness incurred in armed forces. Upon application, deferment for filing or paying granted until 6 months after the return is due; one year for members outside CONUS.
GEORGIA: Same as federal.	$1500 if single; $3000 if married or head of family; $700 additional if a student; $700 each dependent; additional amounts for students and retarded children.	Department of Revenue, Income Tax Unit, Trinity-Washington Building, Atlanta, Ga. 30334	Effective 1 Jan 1969, combat-zone exclusion same as federal. Filing and paying deferment without penalty or interest granted, without application to members outside CONUS until 60 days after return to U. S. Those in combat zone have until 180 days after return to U. S. Abatement provided for death as a result of wounds, disease, or injury incurred while serving in combat zone. Disability retired pay is excluded.
*GUAM:*** Same as federal.	Same as federal.	General Taxes Division, Department of Revenue and Taxation, Government of Guam, Agana, Guam 96910	Same as federal, including combat-zone exclusion, effective January 1964; but, as to service compensation, the government of Guam in practice has not imposed the Guam income tax on U. S. citizens serving in Guam, except on income from Guam sources which is effectively connected with a trade or business. Check proposed regulation on nonservice-connected Guam income.
**NOTE: Guamanians and others, who are U. S. citizens through naturalization proceedings in the U. S. District Court of Guam serving with the U. S. Armed Forces, are liable to the government of Guam on income from all sources with credit for any U. S. tax paid.			
HAWAII: (20 April due date) Gross income of $750 ($1500 if 65 or older).	$750 personal exemption. An excise-tax credit; check state instructions.	Hawaii Department of Taxation, Income Tax Division, P.O. Box 259, Honolulu, Hawaii 96809	Same as federal, including combat-zone exclusion, effective 1 Jan 1966. Postponement for filing is same as for federal. First $500 received by a member of a Reserve component. POWs and MIAs have been granted same benefits as are provided by federal law.
IDAHO: Single, under 65 $2050; single, over 65 $2800; married, joint return, both under 65 $2800; married, joint return one over 65 $3550.	Same as federal, plus $10 grocery credit for each person. For 1974 an additional $5 credit for each personal exemption. Proration required for military pay exclusion.	Idaho Tax Commission, 317 Main, Box 36, Boise, Ida. 83722	Active-service pay of full-time officer, enlistee, or draftee is excluded if the full-time duty is or will be continuous for 120 consecutive days or more. Also, postponement for filing is same as federal. Combat-zone exclusions same as federal. MIAs are considered stationed outside Idaho and military pay is exempt.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Determents for United States Armed Forces Personnel
ILLINOIS** If required to file a federal return or if taxable income is more than $1000 multiplied by exemptions claimed for federal tax purposes.	$1000 for each exemption allowable under federal law.	Illinois Department of Revenue, P. O. Box 3386, Springfield, Ill. 62726	All active-service pay is exempt effective 1 Jan 1970. Postponement for filing and abatement of tax by reason of combat-zone death or because POW/MIA same as federal. See note below for exemption from filing returns by legal residents who satisfy all three conditions. They are treated as nonresidents for tax purposes. All retired pay is exempt.
**NOTE: A resident is defined as an individual who is either present in Illinois for other than a temporary or transitory purpose or who is domiciled in Illinois but is absent from Illinois for only a temporary or transitory purpose. An individual who becomes or ceases to be a resident during the year is considered a part-year resident and is required to file a return as a resident for that part of the year for which he was a resident of Illinois.			
INDIANA: *Gross income of $1000 or more.*	*$1000 each taxpayer on separate returns (limited on joint returns to adjusted gross of each spouse up to $1000, but not less than $500 each); $500 for each dependency federal exemption, Renters' deduction, up to $1000.*	*Indiana Department of Revenue, State Office Bldg., 100 N. Senate Avenue, Indianapolis, Ind. 46204*	*Combat-zone exclusion same as federal. First $2000 taxable active and Reserve service pay also exempt. Retired pay taxable same as federal.*
		Local county taxes apply to military personnel.	
IOWA:** (30 April due date) If required to file a federal return or if net income of $2000 or more taxable by Iowa.	Tax credit of: $15 if single; $30 if married or head of family; $10 each dependent.	Iowa Department of Revenue, Income Tax Division, Robert Lucas Building, Des Moines, Iowa 50319	Same as federal, including combat-zone exclusion, plus exclusion of all military pay if on active duty for more than six continuous months (which is subtracted on the tax return). Filing extension granted upon application.
**NOTE: Legal domiciliaries should file a return, even if no tax is due, for record purposes. This is evidence of intent to retain legal domicile in Iowa.			
KANSAS: Gross income of $1900 if single or separated from spouse, $2500 if married.	$600 per exemption.	Director of Taxation, Income and Inheritance Tax Bureau, P. O. Box 692, Topeka, Kans. 66601	Same as federal, including combat-zone exclusion, postponement for filing and paying, and abatement of tax for death resulting from combat-zone service. Effective 1 Jan 1973, the first $2000 of retired pay for those 65 and over is exempt. Military pay as a POW/MIA is not taxable (If tax previously paid, file a claim for refund).
KENTUCKY: Gross income of: $1200 if single or separated, gross income of $2500 if married or head of household.	Tax credit of: $20 for taxpayer, $20 for spouse, $20 each dependent.	Kentucky Department of Revenue, Box 740, Frankfort, Ky. 40601	Same as federal, including combat-zone exclusion. Members may defer filing and paying until earlier of 12 months after termination of service or national emergency. Military-retirement income may be excluded up to $4000 by those 50 or older. Military pay of POW/MIAs is not taxable.
LOUISIANA: (15 May due date) Net income of: $2500 if single or separated, $5000 if married. Gross income of $6000 or more.	$2500 if single, $5000 if married or head of family, $400 for each dependent (less 1 for head of family); plus $1000 per person, including dependents, who are blind, deaf, mentally retarded or have lost a limb.	Louisiana Collector of Revenue, Individual Income Tax Division, Baton Rouge, La. 70821	Disability retired pay is exempt.



Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
MAINE:** Same as federal; or Maine adjusted gross income of $1000 if single ($2000 if 65 or older), $2000 if married (plus $1000 for each spouse 65 or older).	$1000 for each exemption allowable on federal income tax return.	Income Tax Division, Maine Bureau of Taxation, State Office Building, Augusta, Maine 04330	Same as federal including combat-zone exclusion. See note below for exemption of domicliaries who satisfy all three conditions therein.
MARYLAND: If required to file a federal return or if federal income plus Maryland additions exceed Federal requirements for filing.	$800 if single; $1600 if married; $800 each dependent (including one under a multiple support agreement); $800 for dependents 65 or older.	State of Maryland, Comptroller of the Treasury, Income Tax Division, Annapolis, Md. 21401	Combat-zone exclusion same as federal effective 1 Jan 1966. Members outside continental U. S. may defer filing until 3 months after return to U. S. Disability retired pay not to exceed "average annual benefit."
MASSACHUSETTS: Gross income of $2000.	$2000 if single; if married and filing jointly $2600 plus an amount of wages or salary not exceeding $2000 of the spouse having the smaller of such income; if married and filing separately $1000; each dependent $600; tax credit of $4 to each taxpayer and spouse, $8 for each dependent if income subject to tax is $5000 or less.	Massachusetts Department of Corporations and Taxation, Income Tax Bureau, Government Center, Boston, Mass. 02204	Combat-zone exclusion same as federal effective 1 Jan 1971. If requested, and if for due cause, extension may be granted. Tax benefits granted to POW/MIAs, check local state instructions.
MICHIGAN: (Some cities impose income taxes but military pay is exempt by State law.) When federal adjusted gross income exceeds amount of personal exemptions.	$1500 for each exemption on federal return. Limited credits allowed for property taxes, tax on gross rent, city income taxes, and contributions to Michigan colleges and universities.	Michigan Department of Treasury, Income Tax, P. O. Drawer H, Lansing, Mich. 48904	All military pay including retired pay is subtracted on member's income tax return. Extension may be granted.
MINNESOTA: Gross income in excess of $1000 if single, combined gross income in excess of $1800 for married couple, or if the tax on taxable income exceeds the allowable credits.	Tax credits of $21 if single; $42 for married couples; $21 for each dependent; plus rent credits up to $120.	Minnesota Department of Revenue, Income Tax Division, Centennial Office Building, St. Paul, Minn. 55145	Same as federal, including combat-zone exclusion and postponement for filing and paying, plus specific exclusion of $3000 military pay and all mustering-out pay. Additional exclusion of $2000 military pay for service wholly performed outside Minnesota. Members outside the U. S. have automatic extension until 6 months after return for filing and paying. Minnesota Vietnam bonus is not taxable.
MISSISSIPPI: Gross income in excess of personal exemption and standard deduction.	$4500 if single, $6500 if married or head of family. $750 each dependent.	State Tax Commission, Income Tax Division, Box 960, Jackson, Miss. 39205	Combat-zone and hostile-fire pay exclusions same as federal. All military pay of POW/MIAs is non-taxable. Extension of time granted for good cause upon application. The first $5000 of retired pay is exempt effective 1 Jan 1973.

**NOTE: Maine Law provides in part that a resident individual shall mean an individual who is domiciled in Maine unless he maintains no permanent place of abode in this state, does maintain a permanent place of abode elsewhere, and spends in the aggregate not more than 30 days of the taxable year in this state.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
MISSOURI: ** Every individual who has adjusted gross income of $1200, who is required to file a Federal income tax return.	$1200 for self, $1200 for spouse, and $400 each dependent claimed on federal return, $800 additional if head of household or surviving spouse.	Missouri Department of Revenue, Income Tax Department, Jefferson City, Mo. 65101	Reasonable extensions of time upon request. Combat-zone postponement for filing and paying up to 180 days after return from combat zone. Abatement of taxes for year of death or prior years after he entered a combat zone if member died in a combat zone or as a result of wounds, disease, or injury incurred in a combat zone.

**NOTE: Missouri Law provides in part: "Resident means an individual who is domiciled in the state, unless he (1) maintains no permanent place of abode in this state; (2) does maintain a permanent place of abode elsewhere; and (3) spends in the aggregate not more than 30 days of the taxable year in this state; . . ." Tax return should be completed through line 16(b). Affidavit re residency should be attached.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
MONTANA: Gross income of: $720 if single, $1445 if married.	$650 if single; $1300 if married; $650 each dependent.	Department of Revenue State Capitol Building, Helena, Mont. 59601	Same as federal, including combat-zone exclusion, effective 1 Jan 1964. First $3600 of retired pay is exempt. Veterans' bonus is exempt.
NEBRASKA: If required to file a federal income tax return.	None, tax is 11% of federal tax. $13 food sales-tax credit per person claimed on return only if physically present in Nebraska for more than 6 months of tax year.	Nebraska Department of Revenue, Box 94818, State Capitol, Lincoln, Neb. 68509	Same as federal, including combat-zone exclusion and postponement for filing and paying.
NEW HAMPSHIRE: (1 May due date) Investment Income Tax—Any amount of taxable interest or dividends.	$600 for each taxpayer.	State Department of Revenue Administration, Division of Interest and Dividends, Box 345, Concord, N. H. 03301	None.

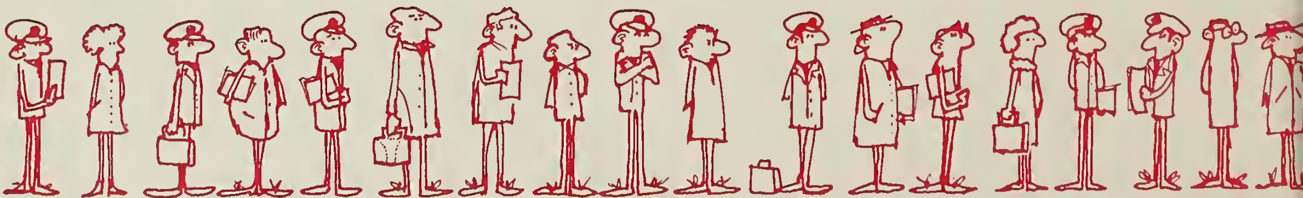
Commuter Income Tax—An income tax is imposed upon nonresident commuters, but all military pay is exempt.

NEW JERSEY
An income tax is imposed on individuals who work in New Jersey but reside in N. Y. or Pennsylvania. All active-duty military pay is exempt.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
NEW MEXICO: Same as federal.	Same as federal. Low income-comprehensive tax credit to actual residents. Consult tax return instructions for amounts.	New Mexico Bureau of Revenue, Returns Processing Division, P.O. Box 630, Santa Fe, N. M. 87501	Same as federal, including combat-zone exclusion. Commissioner may defer filing and paying for 12 months for good cause. Extension automatic for Vietnam hospitalization or service.
NEW YORK: ** If federal income tax return is required, if New York adjusted gross income exceeds exemptions, or if, for minimum income tax purposes, you have any items of tax preference in excess of the specific deduction.	$650 for each federal exemption.	New York State Income Tax Bureau, State Campus, Albany, N. Y. 12227. For a complete summary of tax information pertaining to military-service personnel, request New York State pamphlet MS-60.	Same as federal, including combat-zone exclusion. See note below for exemption of legal residents who satisfy all three conditions therein. Compensation for POW/MIAs is exempt. Taxes are abated in cases of death in action, in combat zone.

**NOTE: Sec. 605(a) of the New York State Income Tax Law provides in part: "A resident individual means an individual: Who is domiciled in this state, unless he maintains no permanent place of abode in this state, maintains a permanent place of abode elsewhere, and spends in the aggregate not more than 30 days of the taxable year in this state . . ."

"Living in government quarters may qualify as maintaining a permanent place of abode. However, a place of abode is not deemed permanent if it is maintained only during a temporary stay for the accomplishment of a particular purpose. The New York State Income Tax Regulations defines a permanent place of abode as a dwelling place permanently maintained by the taxpayer, whether or not owned by him. A statement of facts should be submitted. Claims for refunds for open years should be submitted on Form IT-113X."



Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
NORTH CAROLINA: Gross income in excess of personal exemption without inclusion of exemption for dependents.	$1000 if single or a married woman; $2000 if head of household, married man, widower or widow with a minor child, or divorcee with custody of a minor child and receiving no alimony or child support; $2000 additional with a dependent having an I.Q. under 40; $600 additional for dependent enrolled full time in an institution of higher learning; $600 each dependent.	North Carolina Department of Revenue, Individual Income Tax Division, P. O. Box 25,000, Raleigh, N.C. 27640	Combat-zone exclusion same as federal. Abatement of taxes, if death as a result of action in combat zone. Interest or penalty will not be assessed for taxes due while member is in combat zone or hospitalized as a result of wounds, disease, or injury incurred while serving in such zone. The first $3000 of retired pay is exempt effective 1 Jan 1973. Disability pay is exempt. Commencing 1974, reductions for RSFPP and SBP are excludable from gross income. All prior reductions previously included in gross income (if any) may also be recouped.
NORTH DAKOTA: If required to file a federal income tax return.	Same as federal plus one extra exemption of $300 if married and filing a joint return, head of household, or surviving spouse.	North Dakota State Tax Dept., State Capitol, Bismarck, N. D. 58501	$1000 military exclusion for active, and Reserve and National Guard service. Members serving outside the U. S. may defer filing and paying, without penalty or interest until the date the federal return is due.
OHIO: Adjusted gross income in excess of exemptions.	$500 for himself, wife and each dependent.	Ohio Department of Taxation, P. O. Box 2679, Columbus, Ohio 43216	Combat-zone exclusion same as federal. Retired military, regardless of age, up to $4000.

Some cities impose income taxes; however, military pay is exempt.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
OKLAHOMA: Same as federal.	$750 if single; $1500 if married; $750 for each dependent.	Oklahoma Tax Commission, Income Tax Division, Oklahoma City, Okla. 73191	First $1500 of active-service or retirement pay is excluded. Filing and paying by member outside the U. S. or hospitalized in the U. S. deferred without penalty or interest until 15th day of 3rd month following month of return or discharge from hospital. Extensions may also be granted. POW/MIA pay excluded from taxation.
OREGON: ** If federal return is required or income subject to Oregon income tax.	Same as federal as modified: $675 per exemption; low income allowance limited to $1050 on joint return. Child care deductions have pre-1972 limitations. $50 credit for permanent loss of use of two limbs.	Oregon State Department of Revenue, Salem, Ore. 97310	$3000 specific military-pay exclusion plus federal combat-zone exclusion and postponement for filing. Taxpayer 65 or older may exclude $2400 retired military pay—reduced dollar-for-dollar by earned income effective for tax years ending on or after 9 Sep 1971. See note below for exemption of domiciliaries who satisfy all three conditions therein.

**NOTE: Section 316.027 of the Oregon income tax law provides that a "resident of Oregon" means an individual who is domiciled in Oregon unless he (A) maintains no permanent place of abode in Oregon, (B) does maintain a permanent place of abode elsewhere, and (C) spends in the aggregate not more than 30 days in the taxable year in Oregon.

Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
*PENNSYLVANIA:*** Any income.	None.	Department of Revenue, Personal Income Tax Bureau, State Capitol, P. O. Box 8111, Harrisburg, Pa. 17129	All military compensation earned out of state is exempt effective 1/1/74. All other income is subject to note below. Any military pay received while serving in a combat zone is exempt. Reasonable extensions of time for filing returns may be granted. Retired members should check special tax provisions for economically underprivileged persons.

**NOTE: Pennsylvania law provides that a resident means an individual who is domiciled in Pennsylvania unless he (A) maintains no permanent place of abode in Pennsylvania for the entire year, (B) maintains a permanent place of abode elsewhere for the entire year, and (C) spends in the aggregate not more than 30 days of the taxable year in Pennsylvania. Living in government quarters is not considered as *maintaining* a permanent place of abode.

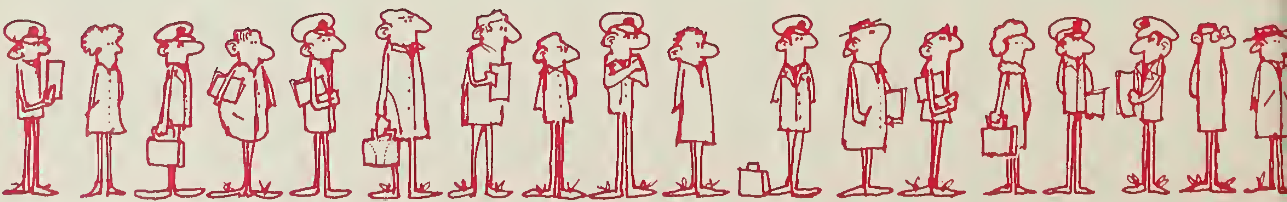
Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
PUERTO RICO: Gross income in excess of: $800 if single, separated from spouse, or if head of family; $2000 if married.	$800 if single or separated from spouse, $2000 if married or head of family, $600 each non-university dependent, $1000 for each university dependent, $800 for each dependent mentally or physically defective, blind, or age 65 or over. Rent credit and child care. Check local instructions.	Commonwealth of Puerto Rico, Department of the Treasury, Bureau of Income Tax, P. O. Box 2501, San Juan, P. R. 00903	Mustering-out payments are exempt. Act of 15 May 1947, amended May 1967, allows active-service members of Armed Forces during Vietnam hostilities a qualified special $500 deduction during 10 years following honorable discharge.
RHODE ISLAND:* If required to file a federal return.	Same as federal.	Division of Taxation, Income Tax Section, 289 Promenade Street, Providence, R. I. 02908	Same as federal, including combat-zone exclusion. See note below for exemptions of domiciliaries who satisfy all three conditions therein.
SOUTH CAROLINA: Gross income of $800 or more. If 65 or older, tax does not apply if income is $2800 or less without dependents, $4000 or less with dependent spouse or other dependent.	$800 if single; $1600 if married filing jointly or only one spouse has income, or if head of household; $800 each dependent.	South Carolina Tax Commission, Income Tax Division, Box 125, Columbia, S. C. 29214	Combat-zone exclusion same as federal. Drill and training-duty pay of National Guard and Reserve personnel is exempt. All National Guard pay is excluded. $1200 of retired pay of members of uniformed services retired after 20 years' active duty is excluded. Portion of serviceman's retired pay attributable to National Guard or Reserve Drill is excluded. Pay of POW/MIAs is exempt; taxes abate if member dies as a result of combat-zone duty.
TENNESSEE: Income over $25 consisting of dividends from stock and interest from bonds.	Income of blind persons.	Tennessee Department of Revenue, Inheritance, Gift, and Income Tax Division, 830 Andrew Jackson State Office Bldg., Nashville, Tenn. 37242	May defer filing until 90 days after return from combat zone or hospitalization as a result of injury or disease incurred in such zone.
UTAH: If required to file a federal return.	Same as federal.	Utah State Tax Commission, State Office Building, Salt Lake City, Utah. 84134	Same as federal. Members outside the U. S. may obtain late filing penalty waiver if filing before earlier of 15th day of 4th month after return to U. S. or discharge.

**NOTE: Rhode Island Law provides in part that a resident means an individual who is domiciled in this state, unless he maintains no permanent place of abode in this state, maintains a permanent place of abode elsewhere, and spends in the aggregate not more than 30 days of the taxable year in this state.

The Tax Administrator advises that: "Rhode Island domiciliary servicemen are deemed to be subject even though they spend no time in Rhode Island during a tax year."

· This year, several states have tax laws which are new or unusual, that

· Many states have income tax provisions which give specia



Least Income Requiring Residents to File Returns	Personal Exemptions and Credits	Where to Obtain Forms and File Tax Returns	Exclusions and Deferments for United States Armed Forces Personnel
VERMONT:** If required to file a federal income tax return and earned or received more than $100 Vermont income.	Same as federal, plus tax credits for students, sales and use taxes, low-income earners, and senior citizens.	Vermont Department of Taxes, Montpelier, Vt. 05602	All active-duty military pay exempt. Federal postponement provisions for filing and paying apply to Vermont. Commissioner may grant extension for filing and paying for good cause. See note below for exemption of legal residents who satisfy all three conditions therein.
**NOTE: Vermont law provides that if a domiciliary (1) Maintains a permanent place of abode outside Vermont, (2) does not maintain one in Vermont during the entire taxable year, and (3) spends, in the aggregate, no more than 30 days of that taxable year in Vermont, he does not qualify for residency during any portion of that taxable year. "Vermont Income" of nonresidents is income from the taxpayer's business, profession, or occupation (other than military) carried on within the state and rents, royalties, or gains from property located within the state.			
VIRGINIA: (1 May due date) Same as federal.	$600 for each personal exemption.	Commissioner of Revenue, Director of Finance of the county or city of which taxpayer is a resident.	Combat-zone exclusion same as federal effective 1 Jan 1965. Filing and paying deferred during combat-zone service or hospitalization outside the U. S. as a result of such service plus next 180 days. The first $2000 of Armed Forces retirement benefits to retirees who reach age 60 before the close of the taxable year and the first $1500 of retirement benefits received by surviving spouse regardless of age. Both exclusions are reduced by the amount that adjusted gross income exceeds $12,000.
WEST VIRGINIA:** If federal return is required, or if West Virginia adjusted gross income exceeds exemptions.	$600 for each exemption on federal tax return.	West Virginia State Commissioner, Income Tax Division, Charleston, W. Va. 25305	Same as federal, including combat-zone exclusion and postponement for filing and paying. First $4000 of active-duty pay and all retired pay regardless of age. See note below. Must satisfy all conditions therein.
**NOTE: Effective January 1, 1974, a West Virginia domiciliary, if a member of the Armed Forces, is exempt from paying West Virginia income tax on his or her military pay if (1) he or she did not spend 30 days in this state within the taxable year, and (2) such Armed Forces member maintained a permanent place of abode outside this state. In connection with the second condition, it is the Tax Department's position that a permanent place of abode is maintained regardless of whether the serviceman lived in private or government quarters.			
WISCONSIN:** Gross income of: $1950 if single ($2150 if 65 or older), $2600 if married ($2750 if one spouse is 65 or older, $2900 if both 65 or older).	Tax credits of $20 each for taxpayer and spouse under 64; $20 for each dependent; and additional $20 for head of household.	Wisconsin Department of Revenue, P.O. Box 59, Madison, Wisc. 53701	$1000 exclusion of active OR active-reserve military pay OR Fleet Reserve retainer pay. Combat-zone exclusion and postponement same as federal. Income of POW/MIAs is exempt.

**NOTE: Declarations of estimated tax need not be filed by persons on active duty outside CONUS.

hould be noted by Navy men and women who are domiciled in them.

nsideration to members of the armed forces.

• NEW TYPE IDENTIFICATION CARDS TO BE ISSUED

For the first time since 1959, all active duty Navy people will receive a new type of identification card. The new ID will combine the present one with the Geneva Convention card. Fingerprints, not required on the new IDs, will be replaced with a Geneva Convention code number. Recruits at training centers will be the first to receive the new cards; others will get them when they reenlist, are sent overseas, change pay grade, lose or damage their present card, or have had their present card four years. In any event, all Navy people will receive a new card by 1 Jul 1976.

Medical and dental personnel, and chaplains and their assistants will receive an additional ID card that will identify them in accordance with the Geneva Convention. The new regular IDs will still be green, while the additional cards for nonconbatants will be white. There will be no change to dependents' ID cards.

• NAVY CAMPUS FOR ACHIEVEMENT PROGRAM EXPANDS

Shelby State Community College, Memphis, Tenn., last week became the eighth school to offer Navy people degree opportunities through the Navy Campus for Achievement (NCFA). This program is a means to earn college degrees, vocational or technical certificates and high school diplomas. Participating degree-offering schools waive residency requirements for Navy people, and accept credits earned through "non-traditional" means such as service schools, examinations, the Program for Afloat College Education (PACE), correspondence courses, self-study programs and, in some cases, military on-the-job experience. Other educational institutions are expected to join the NCFA program in the future. (In addition to Shelby State, the other institutions participating in the NCFA as degree component schools include the University of West Florida at Pensacola; Pensacola Junior College; Tidewater Community College, Portsmouth, Va.; San Diego Community College; the University of San Diego; International University, San Diego; and Chapman College, Orange, Calif.)

• STANDARD ORGANIZATION AND REGULATIONS PUBLICATION BEING DISTRIBUTED

An important new publication is being distributed to the Fleet. Entitled "Standard Organization and Regulations of the U. S. Navy," OpNav Instruction 3120.32, it replaces "Shipboard Procedures," NWP 50 (A), and OpNav Notice 5000 of 14 Mar 1974; and supplements U. S. Navy Regulations, 1973.

This new pub puts forth regulations and guidance governing the conduct of all Navy members. It spells out in detail the organization of ships and aircraft squadrons, and the responsibilities and conduct of attached individuals. Chapters cover administration, unit and watch organization, general regulations covering personnel activities, administrative--operational--emergency and special bills, safety, training, and maintenance.

• PROGRESS MADE TOWARD APPRENTICESHIP CERTIFICATION AND RECOGNITION FOR RATINGS

The Department of Labor's Bureau of Apprenticeship and Training has chosen three Navy ratings for study as possible apprenticable occupations. If the study is successful, a Navy man or woman who completes "A" school and a certain number of on-the-job training hours can receive apprenticeship certification and be recognized by industry and the Department of Labor as having the same status as his counterpart in the civilian community.

The initial study will apply to Mess Management Specialist (MS), Instrumentman (IM), and Aviation Machinist's Mate (AD). Officials at the Naval Education and Training Command anticipate expansion into other ratings if the Labor Department study is a success.

- CHAMPUS TEST BEING CONDUCTED IN THE SAN DIEGO AREA

Navy retirees and their dependents or survivors who live within 30 miles of the Naval Regional Medical Center San Diego now must obtain a "nonavailability of services" statement from that facility before they can receive routine, nonemergency inpatient care in civilian facilities under the CHAMPUS program. The new procedure is part of a limited test conducted by DOD, at the request of the House Appropriations Committee, to determine if CHAMPUS costs can be reduced. In the past, these persons were given a choice between military and civilian sources of health care.

The test will last until at least the end of June. If results show increased use of military medical services by retirees and their dependents, it can be expected that the nonavailability procedure will be implemented in other areas.

- REGIONAL DENTAL CENTERS CREATED TO EASE BRANCH BURDENS

Ten regional dental centers were recently established to serve the areas of San Francisco, Long Beach and San Diego, Calif.; Pearl Harbor; Guam; Charleston, S. C.; Washington, D. C.; Parris Island, S. C.; Camp Lejeune, N. C., and Newport, R. I. Regional centers were previously created for Norfolk and Great Lakes areas.

Designed to relieve branch facilities of administrative and fiscal burdens, the centers integrate branches under the command of a single regional dental officer. Establishment of the centers is expected to improve overall dental service and allow more efficient use of personnel. No increase in military personnel or relocation of civilian employees at branch facilities is involved.

- NOMINEES FOR 1975 SAILOR OF THE YEAR DUE SOON

Screening has begun for the FY 1975 "Sailor of the Year" nominees. The program is open to all active duty Navy men and women who are petty officers 3rd through 1st class. Nominee applications must be submitted to the Chief of Naval Personnel by 5 May. Three individuals will be selected, one each from the Pacific and Atlantic Fleets and one from the Navy shore establishment. Winners will be meritoriously promoted to the next higher grade. Further details are contained in BuPers Notice 1700 of 3 Jan 1975.

- AVIATION OFFICER RETENTION GOOD; OTHER COMMUNITIES DOWN

A review of officer retention figures for the first half of FY 75 reveals a generally favorable trend in aviation officer communities and continuing shortfalls in surface warfare and nuclear submarine officer retention.

Pilot retention currently stands at 46 per cent, with an expected 44 per cent retention projected for the year. This is one per cent below the year's goal. Naval Flight Officer retention was 50 per cent with a 47 per cent projection for this year--nine per cent above the year's goal.

Retention in the surface warfare community is of greatest concern with a current retention projection of 30 per cent against a 37 per cent FY goal. This, along with lower-than-desired retention in recent years, will add to the shortfall.

Submarine officer retention is anticipated to be 48 per cent this year, short of the 52 per cent goal.

- JUNIOR OFFICERS NEEDED FOR NUCLEAR POWER TRAINING

The Navy's extensive nuclear shipbuilding program of the next decade will increase the need for qualified unrestricted junior line officers with fleet experience to volunteer for nuclear power training. BuPers is now accepting applications from all interested officers for training and duty in the nuclear fleet. Applications are particularly desired from officers in year groups 1965-71 for nuclear surface assignment, and from year group 1971-73 for nuclear submarine assignment. Application information is contained in article 6610300 of BuPers Manual.

- NEW DESIGNATOR ESTABLISHED FOR ENGINEERING DUTY OFFICERS

A new engineering duty officer category designated 141X has been established. The category is to be filled from officers now holding ship engineering (140X) or ordnance engineering (170X) designators, and affected officers will be contacted individually on the procedure for administrative transfer. The merger is expected to allow closer contact between engineers during all phases of the shipbuilding cycle.

- THREE SAN DIEGO-BASED SHIPS DUE TO HOMEPORT IN JAPAN

USS Lockwood (DE 1064), USS Francis Hammond (DE 1067) and USS Kirk (DE 1087) are changing home ports to Yokosuka, Japan, under the Overseas Family Residence program. They are slated to relieve USS Rowan (DD 782), USS Richard B. Anderson (DD 786) and USS Gurke (DD 783), units of Destroyer Squadron 15. Scheduled dates for the homeport changes are: Lockwood, 1 Mar 75; Hammond, 1 Nov 75; Kirk, 1 Jul 76. Two hundred and eighty dependent families are expected to make the move.

- CONSTRUCTION TO EXPAND FACILITIES AT NEW ORLEANS SUPPORT ACTIVITY

A contract for more than $1.4 million has been awarded for construction to expand facilities at the Naval Support Activity, New Orleans. The addition of the 250-person enlisted dining hall and additional living quarters will complete a BEQ project which was begun in May 1974. When completed by Jan 1976, the BEQ will house 211 enlisted persons.

- POSTAL OFFICIALS CONCERNED WITH MISUSE OF OFFICIAL MAIL

Navy postal officials have expressed concern that some individuals are using indicia (franked mail) to send greeting cards and invitations to social functions. They emphasized that invitations to change of command and retirement ceremonies are considered "official business" and are authorized for indicia mailing. However, Navy balls, calls made and returned, receptions and retirement party luncheons are social functions and indicia cannot be used to mail such invitations. Misuse of indicia mail regulations makes offenders liable to a $300 fine and possible disciplinary action under the UCMJ.

- NINE-YEAR CONTINUOUS DEPLOYMENT ENDS FOR OCEANOGRAPHIC SHIP

USNS Michelson (T-AGS-23) recently returned to the United States for overhaul following nine years of continuous service collecting geophysical data for WestPac Fleet operations. The Military Sealift Command ship, under direction of the Naval Oceanographic Office, has been manned on a yearly rotation basis by three U. S. Navy officers, 25 enlisted men, civilian scientists, and a civil service crew. Following overhaul, Michelson will perform surveys off the West Coast.

- E-1 RATING BADGES ELIMINATED

Because of the short time-in-grade between E-1 and eligibility for advancement to E-2, Navy recruits are no longer receiving the one-stripe rating badge. Wearing of the badge by seaman recruits is now optional.

- ONE OFFICER IN SIX NOW ON ACTIVE DUTY ADVANCED FROM ENLISTED RATES

A recent study made by the BuPers Strength Section shows that as of the end of 1974, among officers now serving on active duty, one out of six has served in enlisted status before reaching commissioned rank. Of the 65,927 naval officers on active duty as of 31 Dec 1974, approximately 10,000 or 15.11 percent, are former enlisted personnel.

- FOUR SHIPS PRAISED BY INSURV BOARD; OTHERS PASS EXAM ON FIRST TRY

A DLG, an LPD, a DE and a Brooklyn-based Reserve Force DD have all been praised for their excellence during recent inspections by the Navy's Board of Inspection and Survey (INSURV).

- USS Dyess (DD 880) was lauded for her crew's knowledge of equipment and maintenance procedures, as well as the ship's excellent overall condition.
- USS Macdonough (DLG 8), homeported in Charleston, S. C., was praised for her outstanding safety program, which cut the number of safety discrepancies to one-third the average usually found on a ship of her type.
- USS DENVER (LPD 9), homeported in San Diego, was cited for the excellent condition of troop spaces, troop cargo areas, ammunition and vehicle storage spaces and overall habitability. The ship was further praised for her electrical safety program which, according to inspectors, ranks among the best seen by the INSURV board.
- USS Paul (DE 1080), out of Mayport, Fla., was also cited by the INSURV board for excellence in use and management of her planned maintenance system (PMS). Her overall level of PMS was judged significantly higher than the Fleet average.

Six other ships recently examined by the 1200-psi propulsion examining boards (PEB) satisfactorily passed their exams on the first try. They were: USS Donald B. Beary (DE 1085), USS Edward McDonnell (DE 1043), USS McCandless (DE 1084), USS Bagley (DE 1069) and USS Capodanno (DE 1093). Additionally, USS Moinester (DE 1097) and Francis Hammond (DE 1067) passed an initial light-off exam during their fitting-out availability and overhaul.

from the desk of the Master Chief Petty Officer of the Navy

WE NEED NEOCS

Something is in the wind for the Navy which could benefit every enlisted member's career path.

In July 1973, a study group, established by the Vice Chief of Naval Operations and headed by RADM Rowland G. Freeman, III, launched a comprehensive examination of the Navy Enlisted Occupational Classification System.

For the unfamiliar, this system is used by the Navy to identify enlisted personnel and billet requirements by rate, rating, and NEC. Proper utilization of the system provides the effective manpower and personnel management required for the accomplishment of the naval mission.

Under today's classification system there exist six general apprenticeships and 82 general ratings. By general rating, I mean a rating in which occupational content is consistent and a broad occupational field is formed. The ST (sonar technician) rating is an example. These 82 ratings compress into 63 master chief ratings, which are then arranged into 11 rating groups, which in turn have 1092 NECs.

Service ratings, on the other hand, are established within general ratings to satisfy the requirement for optimum utilization of minimally trained personnel at lower pay grades. The STG (surface sonar technician) and STS (submarine sonar technician) ratings are examples of service ratings within the broad sonar technician general rating.

While this system has been functional for many years, it has become increasingly obvious that the present system is in need of improvement. During the course of Admiral Freeman's study group, several major problem areas in the existing system were defined.

MCPON JOHN D. WHITTET

First, the study group discovered a tendency in the current system to overspecify a billet. For example, to write a billet for a laboratory technician, one could specify rate and rating, as an HM1, one could specify E-6 and NEC-8506, or one could specify both. Obviously, this sort of procedure creates distribution problems which could compound.

Dual identity was established by the study as another area of confusion. To illustrate this problem, consider the situation which exists with the refrigeration mechanic specialty. There are three ratings—machinist's mate, engineman, and utilitiesman—which call for air-conditioning and refrigeration skills. To further complicate things, there are two NECs which describe this skill. This dual identity complicates both billet writing and distribution.

Another major problem identified by Admiral

Combined Staff Corps Training Program Set Up at Officer Indoctrination School

A new core (or basic) curriculum has been instituted at the Naval Education and Training Center's Officer Indoctrination School (OIS) in Newport, R. I. As a result, all staff corps students, with the exception of those from the Supply Corps, will train together and study the same basic subjects during their six-week indoctrination program. Those in the Supply Corps will continue to be trained at Officer Candidate School (OCS).

The purpose of OIS training is to indoctrinate newly commissioned staff corps officers in naval subjects, concepts, ideals, customs and traditions. This indoctrination, coupled with their professional education, prepares them for careers as naval officers.

The new core subjects are naval traditions and seapower, administration and career development, human resources management, introduction to military law, health and physical fitness, close order drill and defensive driving.

In addition, track (or specialty) topics will be taught to the corps requiring them. They are: "The Nurse's

Freeman's study group can be illustrated by the *Asroc* gunner's mate (NEC 0891). This individual is drawn from two service ratings, sent to school, assigned an NEC, and is thereafter subject to "closed-loop detailing" within his own NEC by virtue of his special qualifications. What has been created is a rating within a rating. Again, management of the rating system is complicated, but more important the individual is often at a disadvantage when it comes to advancement exams which are based on his or her source rating.

Based on these findings, the study group proposed several recommendations which were approved in concept by the Chief of Naval Operations in December 1973. However, final approval has not yet been given by the Chief of Naval Personnel, the Chief of Naval Operations, or the Secretary of the Navy for full go-ahead.

Initially, the study group recommended that revision to the rating structure should result in 32 common core apprenticeships (now we have just six) and 73 ratings (down from our present 82). These would then consolidate at pay grade E-8 into 32 general ratings, aggregated into 23 occupational fields instead of our present old 11 rating groups. The study group also recommended that an occupational field structure be created which would allow for the consolidation of a number of presently independent ratings on the basis of commonality and similarity of skills. This would permit common training in shared skills, and provide increased flexibility in personnel assignment.

Another major proposal was that the present system of relating skill levels to the nine pay grades be eliminated in favor of distinct levels of responsibility and training.

The idea is to identify the skill required to perform in the billet rather than arbitrarily assigning a pay grade, presuming that one in that pay grade could perform the skill. This would put the horse before the cart where it should be; all nine pay grades however, are retained for pay purposes.

The study group emphasized that the role of the chief petty officer should be upgraded. The recommendation of the four-tier skill ladder accommodates the restoral of status to the chief petty officer and enhances the utilization of senior and master chief petty officers in managerial capacities.

The last of the study group's recommendations encompassed a new training strategy. This would embody the creation of a career-long training structure, slightly shorter "A" schools but for *more* personnel and specialized en route training for apprentices as part of the normal pipeline before reaching an ultimate duty station. The study group has also recommended increased training and education in the second enlistment for the career member, more systematic on-board training in the fleet and ashore, and a simplification of instructional materials with supporting remedial reading programs.

Currently, an implementation group within the Bureau of Naval Personnel is working out the details of these proposals and is planning for their implementation. A phased, deliberate implementation is anticipated between fiscal year 1976 and fiscal year 1980 in order to deal with any difficulties which may arise prior to final conversion. A major consideration, of course, will be cost. Needless to say, start-up will cost money but, when implemented, the program will train more people, better, for less total dollars per year.

I strongly believe that the new system will be worth the extra start-up costs. Better personnel classification and job descriptions will help to get the right person in the right billet and give each Navy man and Navy woman a wider range of experience, plus more flexibility in assignment. Under the modern system, training will be more meaningful to the individual, more applicable to job description and functions, and less costly to the Navy. This training will be *systems-oriented* rather than *equipment-oriented* which will give all Navy members more latitude in skills, assignments, and experience.

Like any new project, updating of the classification system has encountered problems with rumors, myths and misinformation. Therefore, I strongly recommend that all Navy personnel help to dispel rumors by awaiting official notification of changes. Many people will be working many long hours to assure a smooth transition. They will need the full cooperation of forces at sea and ashore to meet implementation goals.

Role Within the Medical Department" for Nurse Corps students; "Introduction to Navigation for Engineering" for Judge Advocate General's Corps, Civil Engineering Corps students and Nuclear Power School instructors; and "Casualty Care" for Dental Corps students.

In the past, different curricula had been developed and used by separate schools over the years. A previous merger of OIS, which trained legal officers, dentists and civil engineers, with the Nurse Corps indoctrination program led to the concept of a common approach for all staff corps officers.

There are a number of distinct advantages envisioned for the core curriculum approach, according to Commander Jerald D. Jones, OIS director:

- A student may start the indoctrination program with a maximum delay of only a few weeks, rather than having to wait until sufficient students of his or her corps are available to convene a course.
- There will be a more effective utilization of the school staff, more level loading throughout the year.
- It is also believed that the intermingling of students from the various corps will provide a better, all-round appreciation of the problems faced throughout the Navy.
- The entire program is more closely geared to the routine currently employed by OCS, which means the students will be living in a more structured military environment than has been the case at OIS in the past.

Chronology V

The Cold War Years

and the Emergence of the

Electronic, Nucleonic, Su

This installment of the Chronology of the Sea Service—the fifth in a continuing series—covers the period immediately following World War II, through the Korean conflict, and on to the threshold of the 1960s.

This is a period of transition in the midst of uneasy peace. The Cold War years see the Navy on guard throughout the world, while making new inroads in technology, development and, even, exploration.

The period begins immediately in 1946 with the launching of Operation Highjump in the Antarctic, which was followed in 1955 by an all-out assault against the White Continent by the ships, planes and men of Operation Deep Freeze. Technology made strides in the development of jet aircraft and—above all—the greatest step was taken with the harnessing of the atom's energy as a fuel source, first for submarines and then for surface ships.

Electrifying indeed was the message flashed by the world's first nuclear submarine, USS *Nautilus*, on 17 Jan 1955: "Underway on nuclear power." The message had the same impact as another one would have some 14 years later when man first stepped upon the surface of the moon.

Here then is the U. S. Navy, making continual progress and, at the same time, coping with fast-paced change in an ever-shifting world situation. This was a time of standdowns and buildups. The Cold War years brought on one crisis upon another, covering the entire spectrum from the establishment of the United Nations, the transporting of displaced persons from the war-torn cities of Europe, to the relief of yet another area of the world during the Berlin Airlift.

The post-World War II years start off with continued emphasis in the area of research and development. Many "firsts" are recorded, particularly in the area of aviation and the submarine forces, and marking the emergence of the "Electronic, Supersonic, Nucleonic" Navy. And as the Cold War continued, the Navy played a vital role, typified by the slogan "Mobile Power for Peace."

Left: USS Nautilus and USS Greenling, the new and the old, moored at Boston Naval Shipyard. Right: President Truman, first president to travel underwater in a submarine, aboard USS Tusk.

rsonic Navy

1946

10 Jan—First General Assembly of United Nations opens in London.

23 Jan—First chaplain, LCDR Joseph T. O'Callahan, is awarded Medal of Honor.

1 Apr—Navy Resale System is established.

16 Apr—F-4D *Skyray* aircraft becomes operational, delivered to fleet.

1 Jul—The Naval Air Reserve Program is formally activated.

2 Jul—Navy's first jet aircraft operates from a carrier.

25 Jul—Navy places Naval Air Station at Cubi Point, R. P., into commission.

29 Sep—"Truculent Turtle," a P-2V *Neptune,* begins record, nonstop flight, without refueling, which lasted 55 hours, 17 minutes, over 11,235 miles from Australia to U. S.

1 Oct—Naval Air Missile Test Center, Point Mugu, Calif., is established.

3 Nov—Navy airship, XM-1, ends world record flight of 170.3 hours without refueling.

21 Nov—President Harry S Truman is first U. S. president to travel underwater in Navy submarine.

6 Dec—Navy equips first squadron with AD-1 *Skyraider* attack aircraft.

1947

12 Mar—Initiating the "Truman Doctrine," the President recommends use of U. S. money and military and civilian equipment to assure independence of Turkey; the same doctrine provided assistance for Greeks against Communist full-scale guerrilla aggression. Doctrine approved 15 May.

13 Mar—Naval Air Station, Miramar, Calif., receives first P2V-1 aircraft.

15 Mar—John Lee becomes first Black to be commissioned as an officer in Regular Navy, following those Black officers commissioned during the war in the Naval Reserve.

2 Apr—UN Security Council votes to place Trust Territory islands under trusteeship of U. S.

10 Apr—Submarine *Trumpetfish* becomes first craft to make an underwater telecast.

16 Apr—Congress passes act which gives permanent military rank to members of Navy Nurse Corps.

1 May—Submarine *Cusk* becomes first undersea craft to fire a *Loon* guided missile.

16 May—By act of Congress, Civil Engineering Corps' strength is increased to three per cent of that of Line.

23 Jul—First delivery of a "pure-jet" fighter, the FJ-1 *Phantom,* to a Navy squadron, VF-17A.

24 Jul—Adaptation of helicopters to amphibious warfare is initiated by CNO.

4 Aug—Medical Service Corps is established.

20 Aug—CDR T. F. Caldwell, in *Skystreak* D-558, sets new world speed record, 650.796 mph.

6 Sep—Carrier *Midway* launches first V-2 rocket at sea.

17 Sep—James Forrestal, at the time serving as SecNav, becomes the nation's first Secretary of Defense.

Top left: AD-1 Skyraider. Top right: Navy nurse on the job in Korea; nurses were given permanent military rank on 16 Apr 1947. Middle left: James Forrestal served as SecNav and first SecDef. Middle right: Regular Navy becomes available for women in the Naval Reserve. Bottom left: Groundcrewmen of MATS Squadron VR-6 warm their hands over an open stove during the Berlin Airlift. Bottom right: A Navy R-5D prepares to take off in successful effort to break Berlin Blockade while another, in foreground, and a C-54 await their turn.

14 Oct 1947—A U. S. military aircraft breaks through the sound barrier when the Bell X-1, piloted by Captain Charles E. Yeager, USA, flies faster than the speed of sound. Announcement of the first flight through the sonic barrier is made 10 Jun 1948.

24 Dec—Navy begins Operation Highjump, peaceful conquest of Antarctica.

31 Dec—Navy authorizes establishment of Seabee Organized Reserve.

1948

4 Mar—Test Pilot Training Division is established at NATC Patuxent River, Md., later known as the

U. S. Naval Test Pilot School.

1 Apr—Berlin Blockade begins as Soviets set up a land blockade of Allied sectors of Berlin and refuse to permit U. S. and British supply trains to pass through Soviet sector.

1 Apr—Navy commissions first helicopter utility squadron.

5 May—VF-17A, first "pure-jet" squadron, qualifies for carrier operations.

7 Jul—First enlisted woman is sworn into Regular Navy.

28 Aug—Seaplane, *Caroline Mars*, sets flight record in nonstop, 4748-mile hop from Hawaii to Chicago carrying 42 passengers and seven tons of cargo.

29 Sep 1948—The U. S. Navy's first supersonic aircraft, Douglas research plane D-558-1, breaks through the sound barrier for the first time, flown by test pilot Eugene F. May.

1 Oct—USS *Norton Sound*, after necessary alterations, is recommissioned as first guided-missile experimental and test ship.

15 Oct—First woman officer sworn into Regular Navy.

27 Oct—Navy Transport Squadrons 6 and 8 of the Military Air Transport Service are ordered to Germany to take part in the Berlin Airlift.

1949

26 Jan—USS *Norton Sound* launches first *Loon* missile.

3 Feb—On flight from Moffett Field, Calif., to Wash., D. C., R60 *Constitution* carries 78 passengers and crew of 18 for record nine-hour, 35-minute flight.

4 Mar—World record set by seaplane *Caroline Mars* (JRM-2) for passenger load of 269, including crew, on flight from San Diego to Alameda, Calif.

18 Mar—North Atlantic Treaty is adopted by member nations.

10 May—USS *Norton Sound* makes first shipboard launching of *Lark* guided missile.

3 Jun—John Wesley Brown becomes first Black to be graduated from Naval Academy.

1 Aug—The Naval Air Development Center is established at Johnsville, Pa.

9 Aug—Pilot-ejection seat first used in an emergency escape.

30 Sep—Berlin blockade and Allied counterblockade are lifted after U. S. and British had airlifted 2,243,315 tons of food and coal into West Berlin. Among the U. S. Navy aircraft participating in the massive Berlin airlift were Navy MATS squadrons flying R5D cargo transports.

1 Oct—Navy takes over surface transportation from Army with formation of Military Sea Transportation Service (MSTS) now Military Sealift Command.

1950

1 Mar—Jet fighter, F7U-1 *Cutlass*, makes first flight from carrier.

8 Apr—Navy patrol bomber disappears during training flight over Baltic, 10 crewmembers lost.

21 Apr—An AJ-1 *Savage* long-range attack plane makes its first takeoff from a carrier, USS *Coral Sea.*

11 May—USS *Norton Sound* launches *Viking* rocket.

19 Jun—Seaplane *Caroline Mars* makes flight from Honolulu to San Diego with 144 aboard.

25 Jun—North Korea invades Republic of South Korea.

27 Jun—President Truman announces he has ordered sea and air support to the Republic of South Korea.

29 Jun—USS *Juneau* and USS *Dehaven* open first bombardment in Korean waters. North Korean forces take Seoul.

30 Jun—President proclaims naval blockade of North Korea; commits certain supporting ground units to action.

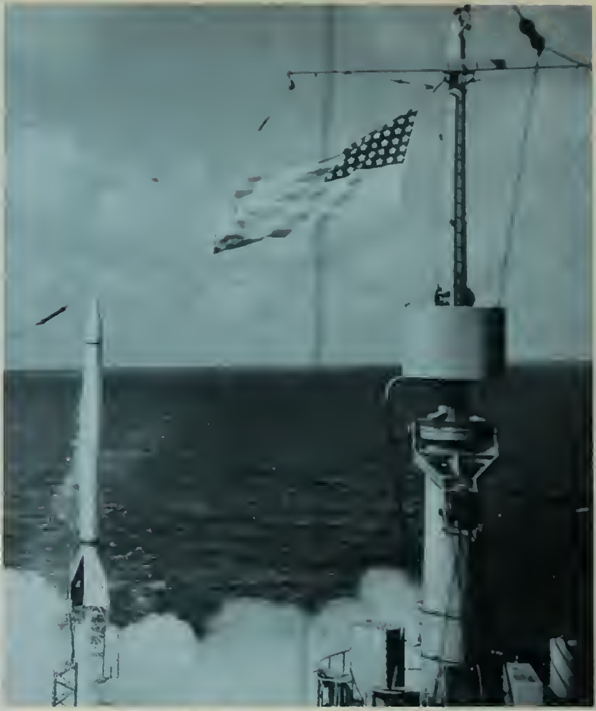
3 Jul—Planes from carrier *Valley Forge*, Air Group 5, launch first combat action in Korean conflict.

22 Jul—First U. S. carrier reinforcements arrive in Far East.

4 Aug—First helicopter evacuations in Korea are made by Squadron VMO-6.

7 Aug—Helicopter automatic pilot is tested at Mustin Field, Pa.

15 Sep—USS *Missouri* bombards coast of Korea. Naval amphibious forces carry out historic landing of U. S. forces at Inchon at a crucial period to help check North Korean drive.



12 Oct—USS *Missouri* fires on Chongjin in Korea.

9 Dec—Navy protects evacuation of United Nations' forces from Wonsan by providing protective bombardment curtain.

12 Dec—Marines fight their way through six Chinese divisions at Chosin reservoir.

24 Dec—Evacuation of Hungnam by Navy completed.

1951

26 Jan—American warships bombard Inchon.

29 Jan—Task Force 77 begins series of air attacks against rail and highway bridges on east coast of Northern Korea.

30 Jan—Kansong is bombarded by U. S. Navy ships.

1 Feb—UN names China as aggressor in Korea.

Navy establishes supply depot at San Pedro, Calif.

5 Feb—First trans-Atlantic flight by group of carrier-type aircraft.

9 Feb—New Zealand, British, Dutch, Australian and U. S. ships bombard both east and west coasts of Korea.

15 Mar—United Nations' forces reenter Seoul; Navy ships bombard Wonsan, kill 8000 enemy troops in seven minutes.

20 Mar—Wonsan bombarded by USS *Missouri.*

29 Mar—An all-Reserve group of the Naval Air Reserve enters combat in Korea.

2 Apr—Navy launches first jet with bomb loads from carrier in combat.

1 May—Aerial torpedoes, used for first and only time in Korean conflict, were fired to destroy a dam.

17 May—Battleship *New Jersey* enters Korean combat; planes from three carriers destroy six bridges between Wonsan and Hamhung.

12 Jun—Mine damages destroyer *Walke* off Korea.

14 Jun—Communist batteries hit USS *Thompson* near Songjin, Korea.

1 Jul—Marine aircraft destroys first enemy plane at night in Korean conflict.

7 Aug—*Skyrocket* jet aircraft flown by test pilot reaches speed of 1238 mph.

15 Aug—*Skyrocket* aircraft is flown to altitude of 79,494 feet.

22 Aug—Converted carrier USS *Essex* enters combat off Korea.

16 Sep—Enemy fire hits destroyer *Perkins.*

3 Oct—Navy places first antisubmarine helicopter squadron into commission.

17 Oct—Shore batteries hit destroyer escort USS *U. M. Moore.*

17 Dec—Helicopter successfully uses JATO for the first time.

21 Dec—Helicopter makes first landing aboard a hospital ship, USS *Consolation.*

1952

27 Feb—Shore batteries hit USS *Shelton.*

Mar—Enemy railway system cut at more than 250 points by Navy aircraft in Korea.

21 Apr—Cruiser USS *Saint Paul* is victim of explosion off Korea.

26 Apr—Total of 176 lost in collision of USS *Hobson* and *Wasp* as *Hobson* sinks.

28 Apr—U. S. Navy announces it will adopt British-developed steam catapult on its carriers.

25 May—Chongjin bombarded by battleship USS *Iowa.*

26 May—Testing of feasibility of angled deck concept is commenced aboard USS *Midway.*

14 Jun—Keel of first nuclear submarine, USS *Nautilus,* is laid.

17 Jun—Navy takes delivery of world's largest nonrigid airship, ZPN-1.

22 Jun—Both coasts of Korea bombarded by Navy ships.

23 Jun—Combined elements of Air Force, Navy and Marine Corps begin air attack which virtually destroys electric power potential of North Korea.

Top from left to right: Early ejection seats. Viking research rocket launched from USS Norton Sound. Operations off the coast of Wonsan. Middle left: United Nations delegation at Korean cease-fire talks in Kaesong, Korea. VADM Turner is in center and RADM Burke is at right. Middle right: USS Missouri (BB 63) bombards Wonsan. Bottom left: Entrance used by Communist delegates at site of Korean cease-fire talks, Kaesong, Korea. Bottom right: First Navy POW repatriated in Operation Big Switch from Korea, Aviation Ordnanceman 3rd Jess McElroy.

1 Jul—Navy establishes supply depot at Yokosuka, Japan.

14 Jul—Keel laid for carrier *Forrestal.*

15 Jul—By this date, UN naval forces had sunk nearly 10,000 enemy water craft in Korean conflict.

31 Aug—For first time in Korean conflict, drones are employed when planes from carrier USS *Boxer* attack bridge at Hungnam.

18 Sep—Floating mine damages destroyer USS *Barton* off Korea.

11 Oct—UN naval ships fire on supply areas near Wonsan.

24 Oct—USS *Helena* and *O'Brien* fire on enemy at Kosong, Korea.

25 Oct—USS *Missouri* fires on enemy troops near Tanchon.

20 Nov—Enemy battery hits minesweeper USS *Thompson* (DMS 38) near Wonsan.

17 Dec—First test of an aircraft equipped with hydro-skids.

1953

12 Jan—Test operations are initiated aboard Navy's first angled deck carrier USS *Antietam.*

22 Jan—Navy aircraft attack Hongwon-Hungnam area in Korea.

2 Apr—Enemy hits cruiser USS *Los Angeles.*

20 Apr—USS *New Jersey* enters and shells Wonsan harbor.

15 May—Enemy shore batteries at Wonsan hit destroyer USS *Brush.*

9 Jun—UN forces launch air and surface attacks against enemy in east control sector of Korean front.

20 Jun—Gunfire from destroyer USS *Gurke* stops enemy trains at Tanchon and Pukchong.

17 Jul—Launching of USS *T-1*, experimental submarine, smallest submarine constructed in the United States since 1913.

27 Jul—Korean conflict truce begins at 159th truce talk held in Panmunjom.

1 Aug—Navy establishes fuel depot at Casco Bay, Portland, Maine.

15 Sep—Keel of nuclear sub *Sea Wolf* laid.

18 Nov—Navy commissions Jim Creek Radio Station, near Seattle, Wash.

5 Dec—Navy commissions high-speed submarine USS *Albacore.*

1954

15 Jan—Opening of Supply Corps School at Athens, Ga.

21 Jan—Submarine *Nautilus* is launched at Groton, Conn.

1 Feb—Navy establishes Task Force 43 for operations in Antarctica.

1 Apr—Three pilots in F-9F *Cougars* make less-than-four-hour transcontinental flights.

25 May—Endurance flight lasting 200.1 hours completed by airship ZP6-2.

11 Aug—Armistice is signed by Indochina and France, after extensive fighting in Southeast Asia. Following the armistice both French and Indochinese appeal to U. S. for aid in evacuation of all people who want to leave Communist-dominated North Vietnam. Forty ships of U. S. Pacific Fleet participate over period of 300 days in evacuation, called "Passage to Freedom."

Top left: Flight deck of USS Antietam. Top right: USS Bennington. Middle: USS Nautilus. Bottom left: Early artist's conception of Mirror Landing System. Bottom right: Banshee is catapulted from USS Kearsarge.

31 Oct—An F2H-2 *Banshee* flies the 1900 miles between Los Alamitos, Calif., to Cecil Field, Fla., in two minutes short of four hours. Ensign D. L. Varner is pilot.

18 Nov—An ultrasonic seaplane, the experimental "Pogo," explodes in midair during demonstration.

3 Dec—Navy recommissions USS *Gyatt* as first *Terrier* missile destroyer, converted to support FBM program.

11 Dec—Carrier *Forrestal* launched at Newport News, Va.

1955

17 Jan—World's first atomic submarine, USS *Nautilus*, sweeps into Long Island Sound at start of maiden voyage, signaling back to New London, Conn., "Underway on nuclear power. . . ." Development Squadron VX-6 is commissioned to provide services for Operation Deep Freeze.

6 Feb—Navy begins evacuation of Chinese Nationalists from Tachen Islands near Formosa.

12 Feb—Evacuation by Navy from Tachen Islands completed, with 24,000 people transported.

16 Feb—Navy adopts gray and white color combination for its planes.

23 Feb—Navy *Skyray* is first airplane to reach altitude of 10,000 feet in less than a minute.

31 Mar—Navy places first high-speed target drone in operation for defense training.

1 Apr—Career Incentive Act becomes law.

2 May—Navy announces the Aviation Officer Candidate Program.

1 Jun—Navy places first electronic countermeasures squadron into commission.

1 Jul—Keel of *Independence* (CVA 62) is laid.

14 Jul—First flight of P6M jet-propelled seaplane.

22 Aug—Carrier *Bennington* employs mirror landing system for first time in U. S. Navy.

12 Sep—Navy announces all fighter aircraft in production will be fitted with equipment for in-flight refueling.

1 Oct—Aircraft carrier USS *Forrestal* commissioned.

7 Oct—Navy commissions its first midget submarine, USS *X-1*.

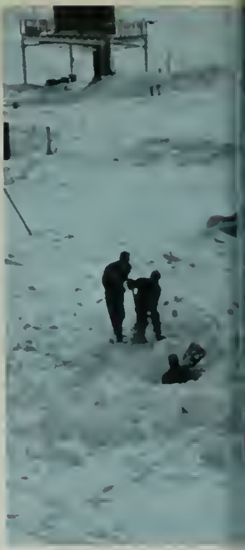
8 Oct—Carrier *Saratoga* (CVA 60) is launched in New York.

15 Oct—Navy *Skyhawk* sets speed record at 695.163 mph over 500-kilometer closed-circuit course, Muroc, Calif.

1 Nov—Navy commissions first guided missile cruiser, USS *Boston*.

4 Nov—Gioconda R. Saraneiro becomes first woman appointed to rank of captain in Medical Corps.

9 Nov—CNO announces decision to equip all angled-deck carriers with mirror landing systems.



2 Dec—First "Texas Tower", radar-equipped platform supported on caissons sunk in the ocean floor and forming part of off-shore warning system against air attack, is turned over by Navy to the Air Force.

20 Dec—Two *Neptunes* and two *Skymasters* fly from Christchurch, N. Z., to McMurdo Sound in Antarctic.

1956

3 Jan—First landing aboard carrier USS *Forrestal.*

10 Jan—Navy establishes Nuclear Power School at New London, Conn.

17 Jan—USS *Nautilus*, world's first atomic submarine, completes first year in operation.

17 Feb—USS *Jallao* makes first visit by a U. S. Navy submarine to Port Elizabeth, Union of South Africa.

3 Mar—F3H-2N *Demon* aircraft becomes operational.

7 Mar—First delivery of *Banshee* aircraft for fleet arrive at VF-14, Cecil Field, Fla.

12 Mar—VA-83 aircraft become first Navy planes to be equipped with *Sparrow* missiles while aboard carrier USS *Intrepid*; first missile squadron to be deployed in Mediterranean.

20 Mar—First HUK-1 helicopter is delivered to fleet.

31 Mar—First delivery of *Skywarriors* to a fleet unit.

14 Apr—Carrier USS *Saratoga* (CVA 60) is commissioned in New York.

21 Apr—First flight made by F-5D *Skylancer.*

23 Apr—Cognizance of Project *Vanguard* within OpNav is assigned to the Guided Missiles Division of DCNO (Air).

26 Apr—Naval Air Engineering Facility replaces Naval Aircraft Factory in Philadelphia, Pa.

15 Jun—USS *Canberra* (CA 70), first and only U. S. cruiser to be named for a foreign city, is commissioned at Philadelphia, Pa. She also honors Australian cruiser *Canberra*, lost in World War II.

14 Jul—After 41 years in operation, Navy Radio Station, Arlington, Va., is deactivated.

20 Jul—The first helicopter assault carrier, USS *Thetis Bay* (CVHA 1), is commissioned.

31 Jul—*Skywarrior* jet flies 3200 miles nonstop, without refueling, from Honolulu to Albuquerque, N. M., in five hours, 40 minutes.

Top from left to right: First helicopter assault carrier USS Thetis Bay. As summer comes, Operation Deep Freeze crew dig out Little America. Bust of RADM Richard E. Byrd, who died 11 Mar 1957, stands at McMurdo Station. Above: R-4D "Que Sera Sera" Skytrain, first plane to land at South Pole. Middle right: Trieste. Bottom: Vanguard launching vehicle in readied for launch.

21 Aug—CDR R. W. Windsor sets F8U-1 *Crusader* speed record—1015.428 mph; Military Petroleum Supply Agency established.

22 Aug—*Mars* seaplane makes last passenger flight from Honolulu to Alameda.

21 Sep—An F11F-1 *Tiger* jet is shot down in freak accident during test when it catches up to and flies into 20-mm shells it fired.

29 Sep—USS *Ranger* (CVA 61) is launched at Newport News, Va.

17 Oct—Turbo-prop seaplane, R-3Y *Tradewind*, makes first California-Hawaii flight in eight hours, 24 minutes.

29 Oct—All major fleet units to sea under maximum readiness as Suez crisis erupts into war.

31 Oct—First landing at geographic South Pole made by Navy LC-47 "Que Sera Sera" of VX-6.

8 Nov—LCDR M. D. Ross and LCDR M. L. Lewis break 1935 record for manned balloons by reaching altitude of 76,000 feet.

27 Dec—Keel of carrier *Kitty Hawk* is laid.

1957

3 Jan—Navy retires last operational *Catalina* PBY-6A at Atlanta, Ga.

10 Jan—Navy commissions Naval Air Mine Defense Unit at Panama City, Fla.

15 Jan—Naval Research Lab dedicates 100 KW Nuclear Research Center.

18 Jan—NAF Lages in Azores is commissioned.

22 Jan—126 passengers rescued from New Zealand merchant ship, SS *Natua*, in Pacific by four U. S. Navy destroyers.

23 Jan—Amundsen-Scott South Pole Station is dedicated by Navy.

1 Feb—LCDR F. H. Austin, Jr. (MC), becomes first flight surgeon to qualify as test pilot.

7 Mar—First turbine-powered catapult tested.

8 Mar—Navy announces that submarine USS *Nautilus* is being refueled for first time since undertaking maiden voyage on 17 Jan 1955; F-11F *Tiger* becomes operational.

15 Mar—Airship ZPG-2 completes flight from South Weymouth, Mass., to Portugal, to Key West, Fla., covering 9448 miles in 264 hours, 12 minutes, without refueling.

21 Mar—*Skywarrior* flown by CDR D. W. Cox, Jr., makes round trip from Los Angeles to New York in nine hours, 31 minutes and 25.4 seconds—east to west segment of flight was made in five hours, 12 minutes, 39.24 seconds.

25 Mar—F8U-1 *Crusader* becomes operational.

27 Mar—Navy takes delivery of first TV2-1 *Seastar* jet trainer.

11 May—South Pole Station records record cold of minus 101 degrees F.

1 Jul—Start of International Geophysical Year in Antarctic by 13 nations.

16 Jul—*Crusader* makes flight from Los Alamitos, Calif., to Floyd Bennett Field, N. Y., in three hours, 23 minutes; two *Skywarriors* fly from Moffett Field, Calif., to Honolulu in four hours, 45 minutes.

30 Jul—First pilotless helicopter flight is made at Bloomfield, Conn.

10 Aug—USS *Ranger* (CVA 61) is commissioned.

12 Aug—First test of Automatic Carrier Landing System aboard carrier USS *Antietam*.

28 Aug—The ground level ejection seat is successfully tested at Patuxent River, Md.

19 Sep—Bathyscaphe *Trieste*, in Med, makes record dive of 3200 meters, or two miles.

28 Sep—USS *Alameda County* redesignated advance aviation base ship.

1958

9 Jan—Pacific Fleet air units begin delivery of emergency supplies to victims of typhoon in Marshall Islands.

20 Jan—YP-6M *Seamaster* seaplane makes first flight.

7 Mar—Navy commissions USS *Grayback* at Mare Island, Calif.

17 Mar—With an originally estimated life of 25 years, *Vanguard* satellite, developed by the Naval Research Laboratory, is successfully placed into earth orbit. Later reports indicate it will remain in orbit for up to 2000 years. It is the oldest man-made satellite now in orbit.

23 Mar—A dummy *Polaris* missile is sent into the air off San Clemente, Calif.

7 Apr—An F11F-1 sets world altitude record of 76,932 feet.

29 Apr—An HSS-1N makes first flight by helicopter cleared for instrument flight.

22 May—An F4D-1 *Skyray*, in series of flights, sets five speed-to-climb records: 3, 6, 9, 12 and 15 thousand meters in 44.392, 66.095, 90.025, 111.224 and 156.233 seconds, respectively.

28 May—First *Talos* guided-missile cruiser, USS *Galveston*, commissioned.

2 Jun—First flight made by all-weather fighter F8U-3.

15 Jul—Sixth Fleet lands force of 1800 Marines (within seven hours of receiving the order) at Beirut, Lebanon, to support local government against rebel forces. Within three days 50 ships are in the area and 5400 Marines are ashore to help avert the crisis in Lebanon.

3 Aug—Nuclear submarine *Nautilus* becomes the first ship in history to reach the North Pole, en route to Hawaii from Atlantic.

6 Aug—President approves Department of Defense Reorganization Act.

7 Aug—Submarine USS *Sea Wolf* dives to begin underwater-cruising record of 60 days.

13 Aug—USS *Nautilus* passes under North Pole.

15 Aug—Navy's *Sparrow III* missile becomes operational.

19 Aug—In its first successful flight, a *Tartar* missile intercepts an F-6F drone.

25 Aug—Ships of Seventh Fleet move to area near Taiwan as Communist China steps up activity there. In following days Seventh Fleet is available to support Chinese Nationalists so they could maintain unbroken supply chain to their off-shore islands of Quemoy and Matsu that were under fire.

31 Aug—First flight of A3-J1 *Vigilante* aircraft.

16 Sep—Submarine *Grayback* makes first launch at sea of *Regulus II* missile.

6 Oct—Nuclear submarine USS *Sea Wolf completes record 60-day submerged voyage.*

25 Oct—Last of U. S. Sixth Fleet forces leave Lebanon.

31 Oct—Navy scraps uncompleted hull of battleship *Kentucky,* which would have been the last of the battleships.

16 Nov—Pro pay becomes effective.

17 Nov—Oceanographic research ship USNS *Chain* placed in service.

25 Dec—U. S. Navy aircraft from Port Lyautey rescue 134 from Moroccan floods.

Top from left to right: Regulus type, radio-controlled, jet target drone. Tartar Missile. USS Skate surfaces at North Pole. Center: St. Lawrence Seaway opens. Bottom: USS Putnam of Task Force 47 nears Chicago.

28 Dec—Antisubmarine group, including carrier *Yorktown*, is diverted from operations at sea to assist homeless victims of a fire in Koniya, Japan.

1959

9 Jan—Nuclear submarine *Halibut* is launched.

11 Jan—Aircraft carrier USS *Independence* commissioned at New York.

4 Feb—Keel is laid for world's first nuclear aircraft carrier *Enterprise* at Newport News, Va.

24 Feb—Navy states that it will scrap battleships *Tennessee*, *California*, *Colorado*, *Maryland* and *West Virginia* and 38 other over-age or obsolete ships.

13 Mar—*Aerobee-Hi* rocket makes first ultraviolet photos of sun from altitude of 123 miles.

17 Mar—Nuclear sub USS *Skate* surfaces at North Pole.

20 Mar—Navy merges Bureau of Aeronautics and Bureau of Ordnance; new bureau is called Bureau of Weapons.

9 Apr—Four naval aviators are among seven persons selected as prospective astronauts under Project *Mercury*.

22 Apr—*Henry B. Wilson*, first guided missile destroyer, is launched.

25 Apr—St. Lawrence Seaway opens. To help commemorate this event, 28 Navy ships of Task Force 47 sail up the Seaway in following weeks, and travel from one end of the Great Lakes to the other. Among them are the heavy cruiser USS *Macon* (CA 132), biggest ship to transit the Seaway up to that time, destroyers, amphibious ships and four snorkel submarines.

26 Apr—HU-2 pilots of USS *Edisto*, en route from Antarctica, complete 10 days of rescue operations in Uruguay, in which they carried 277 flood victims to safety.

9 Jun—First nuclear Fleet Ballistic Missile Submarine, *George Washington*, is launched at Groton, Conn.

14 Jul—Nuclear cruiser *Long Beach* is launched at Quincy, Mass.

3 Aug—First successful flight test of *Subroc* is completed.

27 Aug—*Polaris* missile is fired for the first time from a ship at sea by USS *Observation Island*.

22 Sep—Nuclear sub *Patrick Henry* is launched at Groton, Conn., second FBM sub and sister ship of USS *George Washington*.

30 Sep—The airship training program (LTA) ends at NAS Lakehurst, N. J.

3 Oct—Nuclear sub Theodore Roosevelt, also an FBM, is launched at Mare Island Naval Shipyard, Vallejo, Calif.

10 Nov—Nuclear-powered attack submarine USS *Triton* (SSN 586), the only ship of its class, is commissioned, the longest submarine ever constructed.

30 Nov—Airship training group at NAS Glynco, Ga., ends LTA training in the U. S. Navy.

6 Dec—An F-4H fighter reaches altitude of 98,560 feet, flown by CDR L. E. Flint.

18 Dec—Fourth FBM nuclear sub *Robert E. Lee* is launched.

TAFFRAIL TALK

Last month Rear Admiral William Thompson retired. Since 1 Jul 1971 he held the job of Chief of Information. He was thus our boss and sponsor here when ALL HANDS was transferred to the Navy Internal Relations Activity, CHINFO, in May 1974.

The new Chief of Information is Captain David M. Cooney, USN, who has served with Admiral Thompson since July 1971, and as Deputy CHINFO for the past 18 months. He is, therefore, well prepared for the challenges of his new assignment.

The responsibilities of the Chief of Information are many, all demanding. RADM Thompson demonstrated how effectively he carried them out when he was awarded the Distinguished Service Medal (in June 1974) for "being directly responsible for the creation of the most effective and professional public affairs program in the history of the U. S. Navy."

RADM Thompson's years with the Navy span nearly a third of a century. He entered the U. S. Naval Reserve in 1942, and was commissioned in July 1945 after completing Midshipman School at the University of Notre Dame. He subsequently became a designated Naval Air Observer (Navigator), served as a navigator and instructor, and later in the operations and gunnery departments in USS *Midway* (CVA 41) and USS *John R. Craig* (DD 885).

His interest in—and concern with—the field of information and public affairs began in the early years of his naval career. He did graduate work in the University of Missouri School of Journalism and was a member of the first class of the Armed Forces Information School. In the mid-1950s, while attending the Naval Postgraduate School, he was designated an SDO officer in public affairs. He served as public information officer for ComCruDesPac, and as the first public information officer for ComFirstFleet. RADM Thompson won the Public Relations Society of America's "Silver Anvil" Award for the best press relations in 1962. In July 1964, he became Special Assistant for Public Affairs to the Secretary of the Navy, and, after serving three SecNavs, was awarded the Legion of Merit. RADM Thompson leaves his mark in the Navy as the first public affairs officer to be selected for flag rank.

Captain David Cooney, our new Chief of Information, has a long and distinguished record in the field of Navy public affairs and information. His association with the Navy began as a student at the University of Southern California when he joined the Naval Reserve Officer Training Corps. Graduated from USC with a B.A. degree in Speech and an officer's commission in 1951, he went on to earn a graduate certificate in mass communications from the same university.

Coming on active duty in May 1954, he started his Navy PAO career as a public affairs officer and photo officer on the staff of Commander Seventh Fleet aboard USS *Helena* (CA 75). Since that time he has filled many public affairs assignments with both the Atlantic and Pacific Fleets.

After attending the Naval War College in 1964, he continued his graduate work, receiving the degree of Master of Science in International Relations from George Washington University. CAPT Cooney is the author of a reference book, "A Chronology of the U. S. Navy: 1775-1965," and several papers and articles on seapower and military history.

The All Hands Staff

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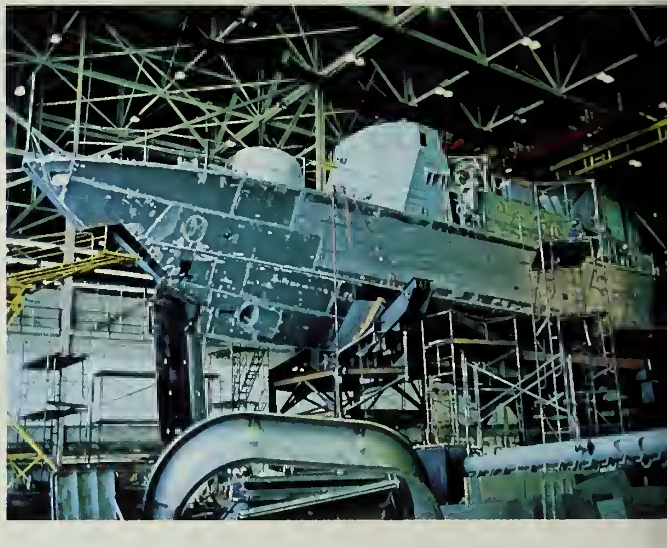
Right: PROUD TRADITION—The intent expression of this Navy woman officer was captured by PH1 Richard Pendergist during a Navy Birthday ceremony at the Washington Navy Yard.

U.S. NAVY
1775-1975

BUILDING ON A PROUD TRADITION



ALL HANDS

in this issue:

NAVY FUEL ON A MOUNTAIN
Squeezing Oil From Stone

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ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

APRIL 1975 NUMBER 699

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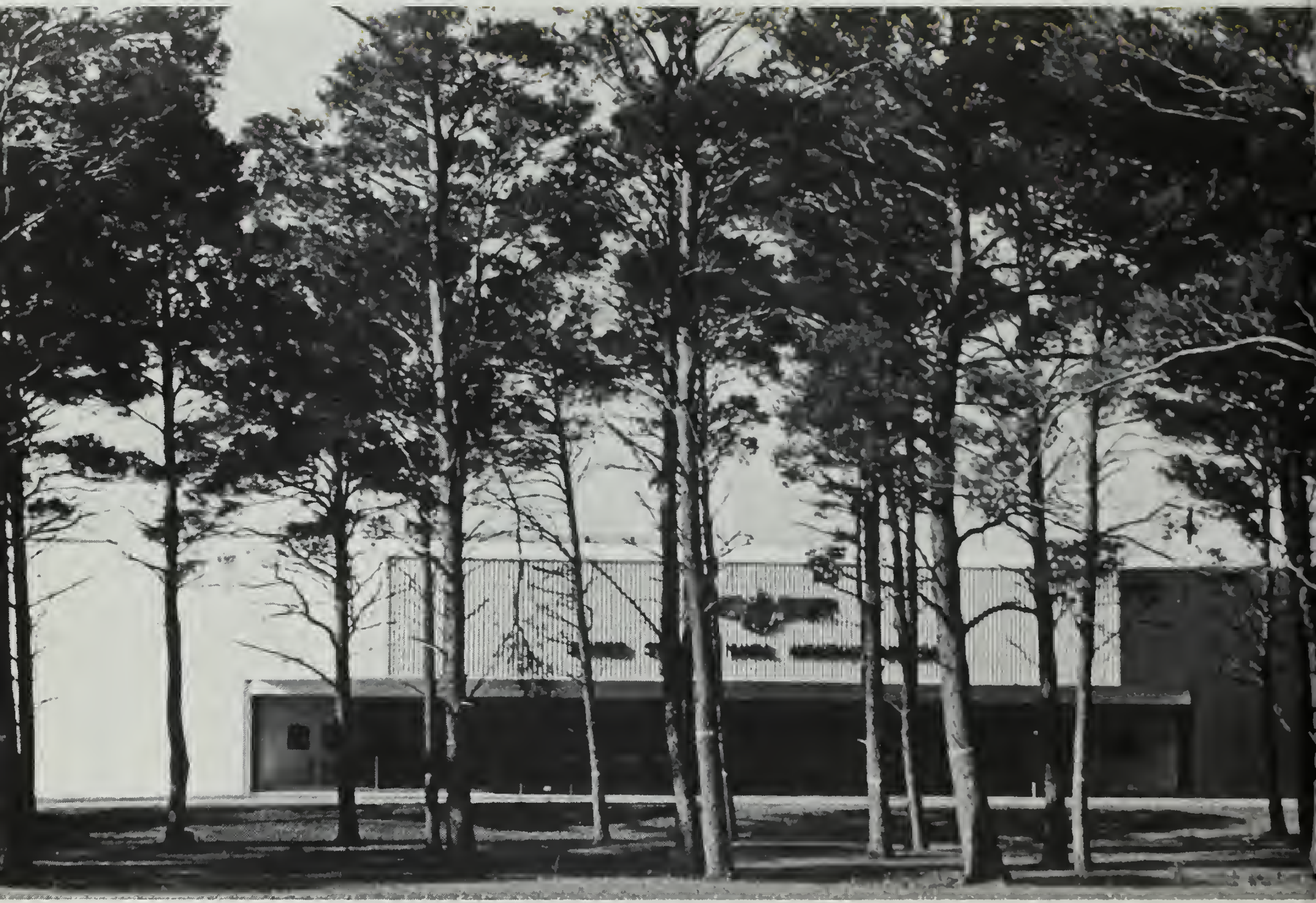
Front cover: USS Spruance (DD 963), newest class destroyer, is silhouetted on a cutaway view of actual oil shale. Photo by PH1 Richard Pendergist.

Back cover: Official logo for Navy's 200th birthday year. Art by DM2 Lloyd Marshall. The insignia itself is symbolic of the proud traditions of 200 years. The 13 stars of the Navy's Birthday insignia represent the original colonies whose Continental Congress formed the Navy. Fifty links on the chain represent the modern states, and the anchor recalls the strength and bravery of mankind inspired by the sea.

Inside front: This remarkable photograph of an F-14A Tomcat fighter aircraft in flight was captured by PHAA Flynn Adams, USN.

WELCOME ABOARD

The New NAVAL AVIATION



Sunday, 13 April, promises to be a gala day and provides another milestone event in the history of naval aviation—the U. S. Navy will receive a brand-new $1.8 million Naval Aviation Museum, completely paid for and ready for visitors.

On that date, the new museum will be dedicated and officially opened before an audience of civilian and military leaders. Included will be dozens of naval aviators who, since 1911, have contributed to the events and artifacts recorded or on display within the museum's walls.

Accepting the keys to the museum for the U. S. Navy will be J. William Middendorf II, Secretary of the Navy. Presenting the keys will be retired Vice Admiral Robert B. Pirie, Chairman of the Board of the Naval Aviation Museum Association, Inc., the civilian organization which spearheaded and conducted the drive for funding of the structure.

Designed by New York architect Paul K. Y. Chen, the museum at opening will contain only 70,000 square feet of the 260,000 square feet planned for eventual construction. Three additional increments of the build-

MUSEUM

ing are planned for construction, as funding becomes available.

Actually, the museum has been open informally since November and thousands of visitors have already had a sneak preview. Still, there was an expedited program underway during the last few months to complete the lighted wall displays, including the four main corner features on the ground floor dedicated to early aviation pioneers; famous leaders of naval aviation; the early aircraft carriers; and the Navy's modern role in the space age.

Other main wall space tells the story of naval aviation from its infancy and birth on 8 May 1911, through the first World War, the 1920s, World War II, the Korean conflict, Vietnam, and the space age. A *Stearman*, an N-9H, and an MF-boat stand in mute yet authoritative silence while the walls proudly project the glories of decades past.

One thing is quite obvious when viewing the structure—a lot of planning went into it. According to retired Captain Grover Walker, the Museum Director, the idea from the very beginning was to develop a structure which would facilitate orderly expansion until it reaches its ultimate size of approximately 260,000 square feet.

Displaying a chart with plastic overlays, Captain Walker demonstrated how each stage will be added in such a manner as to maintain the architectural scheme. The plan is to continue building as the funds become available.

Therefore, each phase will be free of mortgages and financial burdens when completed and turned over to the Navy. Admittedly, in these inflationary times, that's a gigantic undertaking, but it's a determined and set course for those involved.

Much of the building is dedicated to open floor space—in size about the area of the Naval Academy's field house in Annapolis, Md.—which can probably be used effectively to display some 20 aircraft at one time. There is a second floor or balcony-mezzanine which has been set aside to honor naval aviation's Medal of Honor winners, individual squadrons, and display memorial plaques and the like. This section provides an unobstructed, overall view of the museum's main floor and the exhibited aircraft. These planes are dominated by the huge, rebuilt NC-4, the first of the world's aircraft to cross the Atlantic—and a Navy aircraft at that. (Two other NC flying boats accompanied the NC-4 a portion of the way but did not complete the historic journey.)

The remaining tiled ground-floor space, to the right and left of the glass entrance doors, is given over to office spaces, auditorium and a gift shop.

Suspended from the overhead—beneath the center skylight—is a replica of the A-1, the Navy's first aircraft. Directly under this *Triad*, in effective contrast, is the Skylab command module in which the all-Navy crew of Captain Pete Conrad, Captain Dick Weitz and Captain Joe Kerwin traveled to and from the Skylab in 1973.

The Naval Aviation Museum's real birthday is 14 Dec 1962, when it was established at the Naval Air Station, Pensacola. It was set up to provide a continuing Navywide collection of aviation material—planes, flight gear, photos and the like—having historical, educational or inspirational significance. The museum's mission then and now is to "select, collect, preserve and display" appropriate memorabilia representative of the development, growth and historic heritage of United States naval aviation.

The old museum building, also aboard the Pensacola Naval Air Station, was built during World War II. It was dedicated in June 1963 and was temporary even from its beginnings. The structure soon became inadequate both in size and facilities and it only measured some 8500 square feet (less than one-eighth of the new museum's Phase I floor space). The small structure was rapidly filled.

The new museum, begun in November 1972, will carry the original mission to its zenith—it is, and will increasingly become, a shrine of sorts but, more importantly, a repository of aviation artifacts of primary interest to today's and future generations of Navy people.

Fundamentally, the museum is concerned with its historical and educational significance. Historically, it defines and traces the technological progress associated with notable events, achievements and the association and accomplishments of various individuals. Educationally, the museum signifies a potential for giving the observer a better understanding of vital events and the part those events played in the shaping of naval aviation. It's one thing to see photos and paintings of old aircraft; it's another to stand close to them, realize their size, their bulk, sometimes their fragility and—at the same time—envision the strength of character of those early aviators who flew those machines "by the seat of their pants."

That's where inspiration comes in—along with the tradition, accomplishments and the exploits, even the lives, of those early pioneers of the air.

Money is at the heart of most endeavors of this type. No government tax money is involved, only private and corporate donations have been used to turn the new museum from a dream on paper to a blueprint, then into the final structure. Private donations will continue to be the very lifeblood of the project.

Visitors by the thousands pour into the area each year and new superhighways and service roads make the station easily accessible. The government station on Pensacola Bay—dating back to 1824 when a Navy Yard was created there—is a must for every tourist visiting western Florida. The station is on the Gulf of Mexico and is 50 miles southeast of Mobile, Ala.

Impetus for the modern Naval Aviation Museum was brought about by the late Admiral Arthur W. Radford, an illustrious aviator and the first naval officer to serve as Chairman of the Joint Chiefs of Staff. He was joined by others in forming the Naval Aviation Museum Association, Inc., including retired Vice Admiral Robert B. Pirie, among many others, primarily aviation-minded citizens. It was becoming quite obvious that the old museum was bursting at the seams and there were still many, many famous aircraft which should be acquired. Several aircraft were in the inventory of the Smithsonian Institution, particularly in storage at its Silver Hill, Md., facility, but even the National Air and Space Museum is constantly plagued by space limitation problems. There were also many aircraft held by private individuals who were willing to give the Navy custody of them for exhibition purposes. Aircraft, either old or new, take up a lot of space—probably only railroad engines and associated equipment take up as much space as do static airplanes.

The call went out for public subscription in 1966 to

Left: Model of USS Shangri La and embarked aircraft. Below from left to right: A-1 Triad. NC-4, first aircraft flown across Atlantic. Flight suits and aviators' equipment display. Early fighter.

erect a new and permanent home for the Navy's aircraft and help obtain aircraft from private collections for display. Charter memberships were issued to individuals donating $1000 or more, organizational memberships have a minimum of $500, life memberships cost $100, and "In memoriam" memberships honoring deceased persons also have a $100 minimum. Annual memberships can be had for $10. All memberships are engraved on plaques or shields, except annual memberships which are entered only in the museum's log.

Present plans call for putting the more valuable—or fragile, certain extinct or one-of-a-kind—aircraft and replicas inside the building, protected from the elements. The more modern aircraft will be displayed on the grounds, ringing the building complex in a pattern yet to be decided upon. These will be placed on view as time permits.

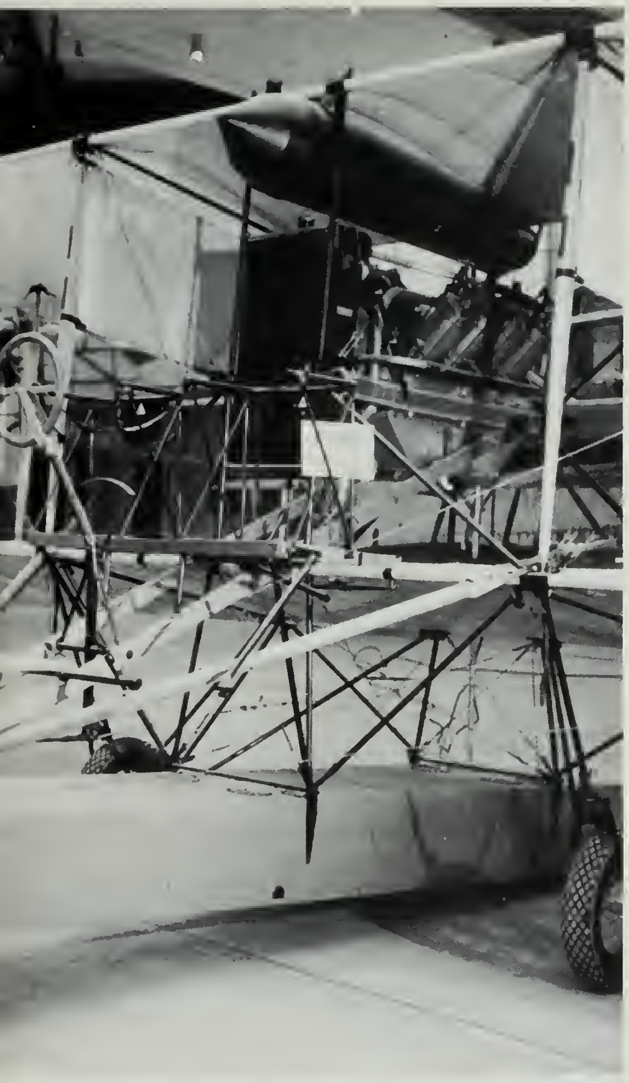
On another part of the Naval Air Station, near the rework facility, is another plane of 1950s vintage, waiting to take her place alongside the museum's other aircraft. It's a wingless P-5M seaplane covered with thick, black preservative and, up until the last minutes of her journey to Pensacola, she was considered to be in great shape. Then, during the final unloading from the ship which carried her, the contractor let her slip while on the crane and a three-foot fall onto the dock banged the after end almost beyond recognition. The museum may perhaps repair the stern or the damaged section may be cut off and the seaplane could then become a walk-thru exhibit, especially of interest to children.

According to an OpNav Instruction (5750.10B of 5 Nov 1974), the museum's director makes all accessions in the name of the Curator for the Department of the Navy, ensuring inclusion in departmental records and providing a central accountability. Primarily, the basis for determining suitability of materials for the museum is determined by the extent to which acquisition of a particular item will assist the facility in portraying the growth and traditions of naval aviation.

The kind of material continually desired by the museum consists of such items as: aircraft, including their parts and their pieces; models of aircraft and ships; engines and engine parts; instruments; ordnance, armament and air weapons; radios and electronic equipment; flight gear, navigation aids; landing and launching aids; and ship and squadron insignia.

In the area of personal memorabilia are photographs and photo albums, wing insignia, medals, uniforms or parts of uniforms, flight clothing and strictly personal papers.

Materials considered by commands or individuals suitable for transfer to the Naval Aviation Museum should be reported to the Director, Naval Aviation Museum, NAS, Pensacola, Fla. 32508. The director will



determine whether the material is desirable and, if so, will notify the holder as to its disposition. In cases where items cannot be easily identified or associated with a special event or person, yet appear to have some value, they should also be reported by photograph on the grounds that a description may reveal some significance which will lead to its preservation.

In 1914, the first contingent of naval aviators—nine officers, 23 enlisted men and seven aircraft—arrived at the Pensacola Navy Yard to begin a new chapter in a book, "Pirates to Pilots." The Naval Aviation Museum has captured pages from that book and the tale is waiting to be read by any interested visitor to the brand-new building. All you need to visit the museum is the same thing those early air pioneers had lots of—initiative.

—J. F. Coleman

Facing page top: Skylab II Command Module. Left: Young Navy people have the opportunity to study aviation history at close range in the museum. Below: A-1 Skyraider awaits restoration.

Here's What You'll Find At Naval Aviation Museum

More than 50 aircraft ranging from the famed A-1 *Triad*, first of the Navy's long line to an *Apollo* space capsule, are among those either on exhibit or planned for exhibit in the new Naval Aviation Museum scheduled to be dedicated 13 April in Pensacola, Fla.

Here's a rundown of aircraft in the collection:

- *A-1 Triad* built by Curtiss, 1911-12, an exact reproduction of the Navy's first aircraft; on loan from the National Air and Space Museum, Silver Hill, Md.
- N-9H, a rebuilt seaplane trainer of 1917-1922 era; built by Burgess, it is the only one of its kind known in existence; acquired from NASM.
- MF-Boat, built by the Naval Aircraft Factory, is a modified version used as a World War I trainer in 1918; obtained from Mr. George S. Waltman of Great Neck, N. Y.
- NC-4, a reproduction of the long-range patrol flying boat of the 1918-1922 era; built by Curtiss, it is on loan from NASM.
- F4B-4 carrier- and land-based fighter, 1929-1938, is the only one of its kind; obtained from NASM.
- RR-4 "Tri-Motor" (Tin Goose) built by Ford, 1932, is a general transport capable of carrying two crewmen and 15 passengers; donated by Mr. and Mrs. Dexter Coffin of Palm Beach, Fla.
- FF-1 carrier- and land-based fighter of the 1933-1936 era is believed to be the only one of its kind in existence; donated by Grumman Aircraft Corp.
- PBY-5 *Catalina* patrol flying boat built by Consolidated, 1936-1949; on loan from NASM.
- SBD *Dauntless* (formerly A-24) is a carrier-based scout plane and dive bomber of the 1938-1945 era; built by Douglas and acquired from City of Portland, Ore.
- N3N-3 *Yellow Peril*, famous primary trainer used for 21 years beginning in 1938; built by the Naval Aircraft Factory, it was the last biplane in U. S. Navy service; obtained from the Naval Air Material Center.
- OS2U-3 *Kingfisher* was built by Vought; historic observation-scout plane used between 1940 and 1946; obtained from the Uruguayan Navy.
- PB2Y-3 *Coronado* patrol bomber flying boat built by Consolidated from 1940 to 1945; donated by Hughes Helicopters.
- N2S-4, another *Yellow Peril*, famous World War II Stearman-built biplane trainer first placed in operation in 1941; donated by Dr. L. A. Youngs of Lakeland, Fla.
- RC-45J *Expeditor* (formerly JRB) built by Beech is the last operational C-45 type with more than 30 years' service; obtained from Naval Air Technical Training Unit, NAS Pensacola, Fla., circa 1941.
- C-47J, world-famous *Skytrain*, formerly R4D-6, is a Douglas-built cargo transport, circa 1941; obtained from the Naval Air Rework Facility, NAS Pensacola, Fla.
- C-54Q (formerly R5D-3), a personnel, logistic and

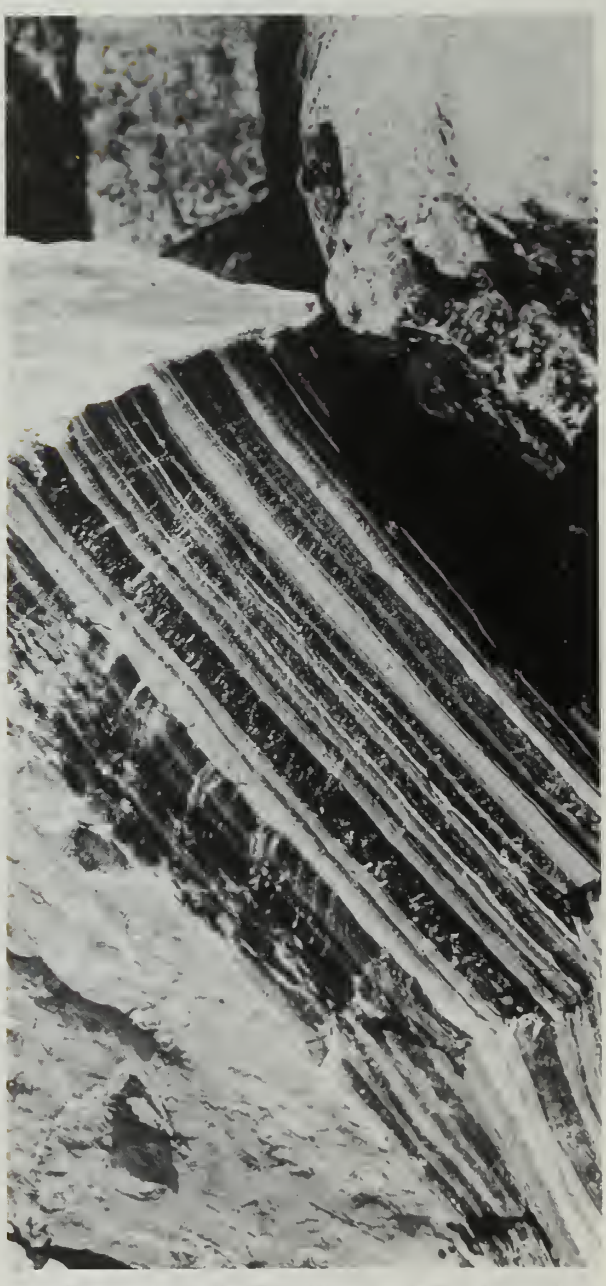
Unique Carrier Landing: A McDonnell Douglas A-4B jet is cable-hoisted on board USS Lexington (CVT 16) by helicopter from Fort Hood, Tex. This recent landing took place almost 19 years after the A-4B attack aircraft made its maiden flight on 26 Mar 1956. The transfer took place off the Texas coast where the Pensacola-based carrier was being used for carrier qualifications by student naval aviators training in the area. Lexington carried the A-4B back to Pensacola for eventual placement in the new Naval Aviation Museum along with other aircraft which have played significant roles in the 64-year history of naval aviation.

staff support aircraft first built in 1941 by Douglas; obtained from NAS Pensacola.

- TBM-3E *Avenger*, torpedo-bomber, 1942-1954; built by General Motors and obtained from NAS Jacksonville, Fla.
- SB2C-5, World War II *Helldiver*, is a Curtiss-built, carrier-based scout-bomber used from 1942 to 1949; on loan from NASM.
- F4U-ID, World War II *Corsair*, is a Vought-built, carrier-based fighter in operation from 1942 to 1955; on loan from NASM.
- F6F-5 fighter of WWII built by Grumman from 1943 to 1953; obtained from Aerial Classics, Atlanta, Ga.; it is displayed with markings of the Navy's top-scoring ace, CDR Dave McCampbell.
- EC-121K *Super Connie* Lockheed-built electronic countermeasures aircraft, circa 1943, obtained from Training Squadron 86 (VT-86).
- J2F-6 *Duck* is a utility amphibian produced by Grumman in 1943 and licensed to Columbia.
- SNJ-5B *Texan* basic trainer was first operational in 1943; built by North American, donated by Mr. Paul Pribble of Downey, Calif.
- F8F-2P *Bearcat* medium-altitude carrier interceptor of the 1945-1953 era was the Navy's last prop fighter; built by Grumman, obtained from the Naval Training Center, Bainbridge, Md.
- A-1H *Skyraider* (formerly AD-6) built by Douglas; an attack or utility aircraft of the 1946-1968 era: this plane, received from Attack Squadron 25 (VA-25), made last Navy A-1H *Skyraider* combat strike over Vietnam in 1968.
- EA-1F *Skyraider* (formerly AD-5Q) Douglas-built carrier- or land-based attack or utility aircraft equipped for electronic countermeasures was obtained from Davis-Monthan AFB, Tucson, Ariz., 1946.
- FJ -1 *Fury* built by North American as a carrier-based jet fighter of the 1947-1949 era; on loan from NASM.
- D-558-1 used for high-speed experimental research only, this Douglas-built aircraft set world speed records in 1947; obtained from California State Polytechnic College.
- HU-16D *Albatross* (formerly UF-2), utility aircraft for amphibious search and rescue was first built by Grumman in 1947, is still operational; obtained from the Naval Air Rework Facility, NAS Pensacola.
- HO3S-2 observation and utility helicopter in operation from 1947 to 1954 was built by Sikorsky.
- P2V-1 *Neptune* patrol-antisubmarine search plane built by Lockheed in 1947; on loan from NASM.
- AM-1 *Mauler* single-seat, attack carrier-based bomber of the 1948-1950 era; built by Martin and obtained from the Aberdeen Proving Ground, Aberdeen, Md.
- HRP-1 *Flying Banana* is the world's first transport helicopter; built by Piasecki Helicopter Corp., with a service life from 1948 to 1953; donated by Mr. F. N. Piasecki.
- TH-13M *Sioux* (formerly HTL-6) training and general purpose helicopter of 1948-1968 era; built by Bell and obtained from NAS Ellyson Field, Fla.
- UH-13P *Sioux* (formerly HUL-1) training and general purpose helicopter of the 1948-1973 era; built by Bell and obtained from the Naval Coastal Systems Laboratory, Panama City, Fla.
- F-2D *Banshee* (formerly F2H-4) carrier-based fighter from 1949 to 1959, built by McDonnell; obtained from the Naval Air Technical Training Unit, NAS Jacksonville.
- F9F-2 *Panther* carrier-based day fighter from 1949 to 1958 built by Grumman; obtained from NAS Pensacola.
- F4U-5N *Corsair* carrier-based night fighter of the Korean conflict, circa. 1950; built by Chance-Vought; obtained from the Naval Training Center, Bainbridge, Md.
- XF-3D *Skyknight*, Navy's first all-weather jet fighter delivered in 1951 during Korean conflict; built by Douglas and received from NAS Norfolk.
- OH-19E *Chickasaw* (formerly HRS-3) is a Sikorsky-built general utility helicopter of the 1951-1969 era; obtained from the Marine Corps Air Station, Beaufort, S. C.
- UH-25C *Retriever* (formerly HUP-3) search, rescue and utility helicopter of 1951-1964 era; built by Piasecki and obtained from the Naval Air Facility, Litchfield Park, Ariz.
- SP-5B *Marlin* (formerly P5M-2S) patrol flying boat built by Martin for service from 1952 to 1967; obtained from NAS Norfolk.
- TS-2A *Tracker* (formerly S2F-1T) antisubmarine search and attack training aircraft built in 1952 by Grumman; obtained from NARF Pensacola.
- F9F-6 *Cougar* carrier-based jet fighter built by Grumman for 1952-1960 era; on loan from NASM.
- F-1E *Fury* (formerly FJ-4) carrier-based jet fighter of 1954-1962 era; built by North American; obtained from NAS Glynco, Ga.
- F-6A *Skyray* (formerly F4D-1) carrier-based, all-weather interceptor in use from 1956 to 1964; built by Douglas; received from NAS Patuxent River, Md.
- OH-43D (formerly HOK-1) crash rescue helicopter built by Kaman for service from 1956 to 1965; obtained from Davis-Monthan AFB, Tucson, Ariz.
- A-4A *Skyhawk* (formerly A4D-1) carrier-based attack-bomber in service from 1956 to present; built by Douglas, received from NATTC Memphis.
- F-3B *Demon* (formerly F3H-2) carrier-borne fighter used from 1956 to 1964; built by McDonnell, received from NATTC Memphis.
- F-8A *Crusader* high-performance, carrier-based day fighter introduced in 1957 and still operational; built by Chance-Vought; received from NARF Pensacola.
- TF-11A *Tiger* (formerly F11F-1) high-performance, swept wing fighter used from 1957 to 1961, built by Grumman; this aircraft was flown by the Blue Angels team leader.
- HRP-2, another *Flying Banana*, rescue and transport helicopter. The first HR2 built by Piasecki, it was donated by him.
- TD-2C1, radio-controlled target drone, built by Culver Aircraft Corporation. It was donated by NAS Norfolk.
- UH34-D *Seahorse*, utility helicopter built by Sikorsky and donated by NARF Pensacola.
- YRON-1, a one-man helicopter built by Gyrodyne and donated by Navy representative at Gyrodyne.

Navy Fuel on a Mountain

Squeezing Oil From Stone



Above: Sample of petroleum-bearing oil shale. Facing page: Hose is over and pumping begins as an aircraft carrier takes on fuel from a fleet oiler during operations in the Pacific.

The heavy fueling rig swung in the breeze created by the speed of the ships and the word was passed to begin pumping. Two Navy ships, an oiler and a destroyer, were involved in an evolution vital to the never-ending process of keeping the Fleet operating. That evolution? Refueling at sea.

To the boatswain's mates, line handlers and others involved in this critical exercise it doesn't matter really where the oil comes from or how it's processed. The important thing to them is that all of it gets into fuel tanks and not on decks. To Navymen, Anvil Points, Colo., is merely a picturesque name, unless one of them happens to be from there, the Oil Shale Capital of the World. That one might tell them that in the hills surrounding his homestead lies the Naval Oil Shale Reserves. *Estimates indicate that enough petroleum is locked within that arid terrain to keep the ships and the rest of the Navy operating for the next 200 years.*

In an area covering the tri-state corners of Colorado, Utah, and Wyoming is the world's largest known deposit of oil shale. Lying therein is a reported 1.8 to 2.2 trillion barrels of potential crude oil or "kerogen."

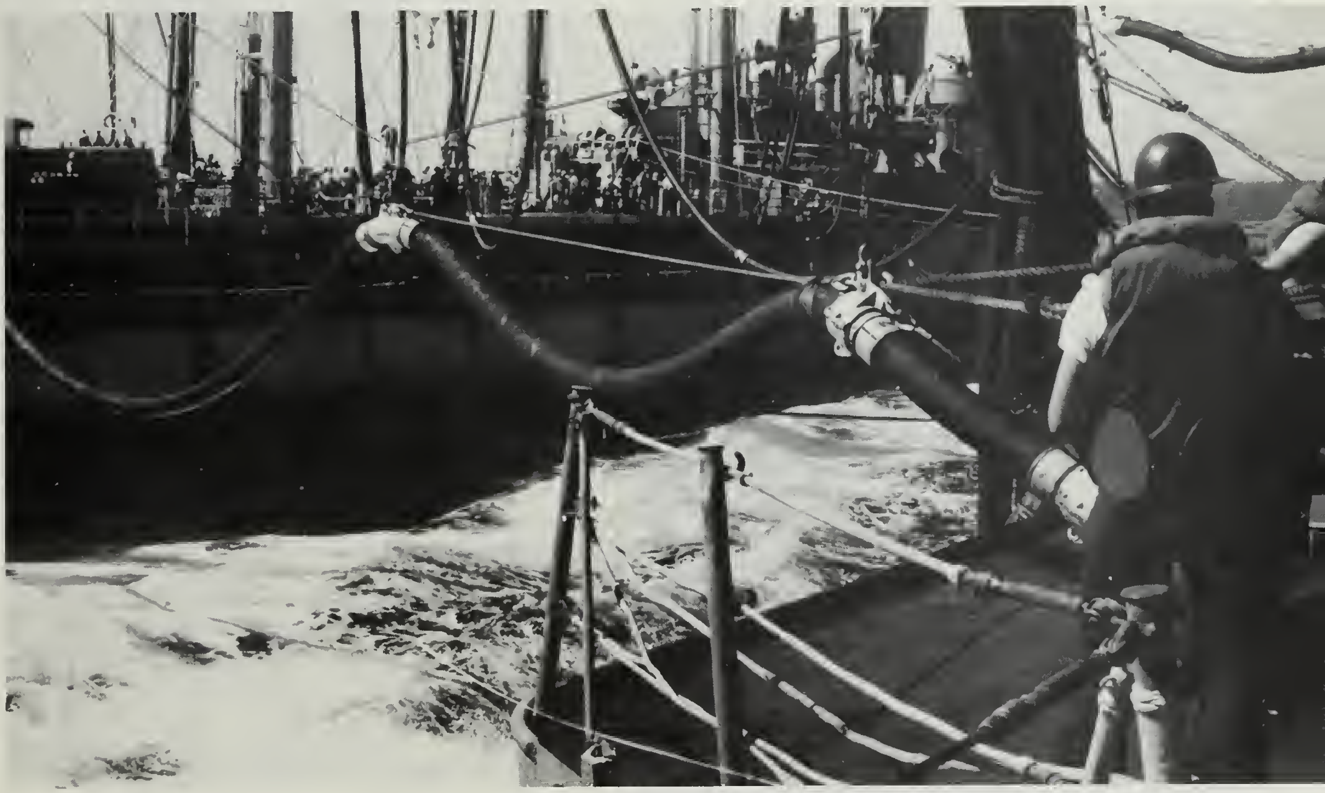
Producing oil from stone is not a new process. As a matter of fact the word "petroleum" stems from the Greek "rock oil." In the year 1350, the Austrians used shale oil for medicinal purposes and, in 1694, England granted a patent "to distill oyle from a kind of stone."

But history tells us the real beginning of shale goes back more than 50 million years, a scant few million years after the demise of the dinosaur. During this period there existed two freshwater lakes which covered the same area as today's tri-state expanse of Colorado, Utah and Wyoming. Here some 40 million years later the Rocky Mountains formed. During the 10-million year period when the mountains were forming, the lakes became stagnant and as the mountains grew, dead plants and animals along with volcanic ash and other sediments settled to the bottom of the prehistoric lakes. When the lakes disappeared completely, deposits of organic materials were left in some areas and were subsequently overlain by sands and sediments. Much of that organic material left in the earth ultimately became the substance man has since labeled "kerogen."

The Ute Indians, in what is now the United States, knew of the "rock that burns," but their efforts to use the stone for heating or cooking proved futile due to the amount of stone needed and the smoke and smell which it emitted.

In the 1850s interest in oil shale grew as did the possibilities of an "oil shale boom" until the advent of the first oil well. The shale by then was being used for lamp oil, lubricants and some patent medicines. Oil was first discovered by Colonel E. L. Drake in Titusville, Pa. That first oil well was to set the stage for diminishing interest in oil shale for decades to come.

Now today, in an era of uncertainty concerning world energy resources, with rising prices and dwindling resources, the production of shale oil has become a valuable area of exploitation. Many geologists believe that kerogen is actually an undeveloped oil. They believe that like other fossil fuels, kerogen began with microscopic plants and animals buried in shallow waters. In the case of kerogen, however, nature didn't



Above: Access road and entrance to oil shale mines. Below: Retort with Colorado River in the background. Facing page top: Artist's conception of oil shale retort. Bottom: Deer from America's largest herd roam freely and safely on the Navy oil shale reserve near Rifle, Colo.

complete the evolution; left out were the heat and pressure which would have resulted in its conversion to oil.

Today's modern technology has allowed mankind to take up where nature left off. Man can now add the heat and force the oil from the stone.

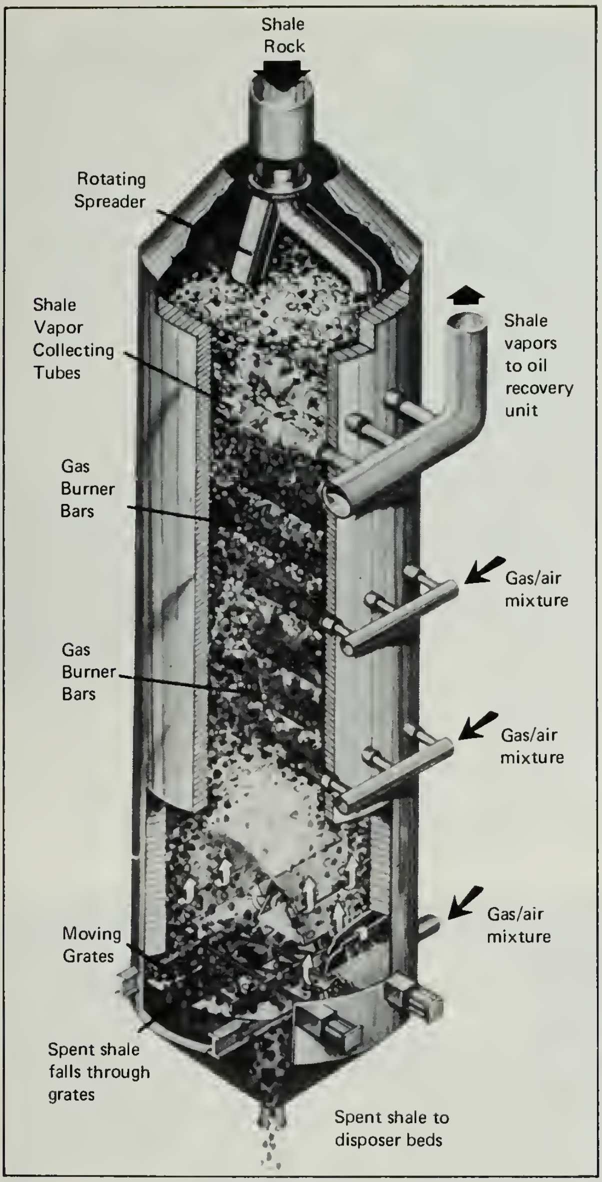
To extract kerogen from shale, one needs a "retort" or a capsule designed to contain and heat the rock. The retort uses a distilling process.

In the retorting process currently being used by the companies doing the research on the naval oil reserves, the shale is extracted from horizontal mines and crushed into fragments one-half to three inches in diameter. It is then fed into the top of a retort, subjected to intense heat (over 900 F degrees) while the oil vapors are drawn off and fed through a condenser. Kerogen is then routed to the storage tanks where it is kept warm to prevent solidification.

Back in 1944, the Synthetic Fuel Act authorized the Secretary of the Interior, through the Bureau of Mines, to conduct laboratory research and development work and to construct and operate experimental demonstration plants in order to produce synthetic fuels. Also in 1944, an oil shale demonstration plant was built on the Naval Oil Shale Reserve near Rifle, Colo., and was used as part of that program.

Today private firms are conducting research to determine the suitability of synthetic fuels for Navy and civilian applications. With the continuing world energy crisis—and with no immediate relief in sight—shale oil could well prove to be a boon to the U. S. Navy as it continues to carry out its worldwide mission at sea.

Perhaps, too, the development of shale oil will provide the nation with a new breath of life as it searches


Shale Rock
Rotating Spreader
Shale Vapor Collecting Tubes
Shale vapors to oil recovery unit
Gas Burner Bars
Gas/air mixture
Gas Burner Bars
Gas/air mixture
Gas/air mixture
Moving Grates
Spent shale falls through grates
Spent shale to disposer beds

for new energy sources to cope with the gigantic demands the future has yet to bring.

Navy Oil Shale: Here Are the Facts

Oil shale ranks second to coal as the most abundant source of nonpetroleum fossil fuel in the United States.

Oil shale produces an organic compound named *kerogen* which is a form of crude oil. It is found in abundance in Colorado, Utah, and Wyoming. Estimates on the amount of crude oil potential range from 1.8 to 2.2 *trillion* barrels, enough to offer a long-term solution to this country's fuel shortage.

That's why there has been so much interest in the subject of oil shale in recent months.

But what connection does the Navy have with oil shale, other than as a potential user of the fuel that may be derived from it?

Here are some facts:

- The majority of the nation's oil shale deposits lie in government-owned lands. The Secretary of the Navy has a responsibility to serve as custodian of some of the nation's best oil shale reserves, which gives the Navy a unique interest in this alternative source of fuel.
- The basic law establishing the Naval Petroleum and Oil Shale Reserves requires that the Secretary of the Navy, directly or by contract, lease, or otherwise, shall explore, prospect, conserve, develop, use and operate the naval petroleum and oil shale reserves at his discretion, subject to approval by the President.
- The Naval Petroleum and Oil Shale Reserves consist of three oil shale reserves (in addition to four petroleum reserves). The three oil shale reserves, located in Colorado and Utah, were established by Congress between 1916 and 1924.
- The Naval Oil Shale Reserves located in Garfield County, Colo., are comprised of about 55,000 acres and are estimated to contain about 12 billion barrels of shale oil from shale containing 15 gallons or more per ton. The Utah reserve is located in Carbon and Unitah counties and consists of about 90,000 acres with an estimated 3.8 billion barrels of recoverable shale oil from shale containing 15 gallons or more per ton. One of the responsibilities of the Director of the Navy Petroleum and Oil Shale Reserves is to encourage, with collaboration of the Department of the Interior, the advancement of technical knowledge with regard to oil shale.
- The Navy has negotiated with the Department of the Interior for test and evaluation quantities of shale oils at no cost for all DOD testing programs. (The Synthetic Fuel Act of 1944 authorized the Secretary of the Interior, through the Bureau of Mines, to conduct laboratory research and development work and to construct and operate demonstration plants to produce

synthetic liquid fuels from coal and oil shale, as well as from agricultural and forestry products and other substances.)

- The U. S. Navy controls some of the richest U. S. oil-shale deposits, in the Naval Oil Shale Reserves (NOSR) near Anvil Points, Colo. Synthetic fuels from oil shale are currently being tested to determine their suitability for Navy and DOD applications. A private research and development firm has been testing oil-shale processes using Navy oil shale under a lease (negotiated by the Department of the Interior) at Anvil Points. The Navy is negotiating with the organization for test-and-evaluation quantities of shale oil, for DOD testing programs.
- A major consideration in the production of oil from shale is its effect on the environment, but one of the greatest problems faced by the nation today is the energy crisis. In the research that is now being carried out, it should be noted that environmental standards must and are being taken into consideration in the development of oil shale.
- One method of extraction of oil shale is by "room and pillar mining." Room and pillar mining is the mining technique envisioned in most shale development plans involving underground mining—and underground mining is in most modern shale development plans. In essence, it means mining out a room and leaving a supporting pillar. In a given room, 60 to 75 percent of the shale will be mined out and 25 to 40 percent will be left in place as a pillar to hold up the roof. In other words the "roof" and the slopes of the mountains are retained (see photos).

Facing Page top: Jim Gigeaux of Paraho Corp. at a revegetation site with retort in the background. Bottom: Inside an oil shale mine. Above: Synthetic crude oil known as kerogen. Lower right: Looking outside entrance of an oil shale mine. Upper right: All hands pull together to hook up a fuel line during refueling operations between USS Camden (AOE 2) and a fleet oiler in South China Sea.

- After the shale is mined, it is crushed and fed into a retort. From the retort comes the crude shale oil and its by-products. It is the by-products which could create another environmental problem. Research is being conducted on possible utilization of the spent shale after the fuel has been removed, for such purposes as building materials or "enriched" soil.

The energy crisis and its effect on the U. S. economy have resulted in a call for national energy self-sufficiency. Rising prices and dwindling petroleum resources make the development of synthetic sources a valuable area of exploration for the Navy.

The fact is that oil shale is capable of providing the first commercial quantities of U. S. synthetic fuels. The development of a proven and available technology base is the aim of the experimental work now going on.

Thus further extraction experimentation may provide technology for the production of synthetic crude oil for the nation—and the Navy—to draw upon should the need arise.

—Story and photos by Richard A. Pendergist, USN

Some Facts About The National

SYNTHETIC FUEL PROGRAM

Editor's Note: The Navy serves as the focal point for synthetic fuel research, development, and testing in the Department of Defense. The Navy represents DOD on the interagency task force for synthetic fuels. Here is a knowledgeable report on synthetic fuels prepared by an expert in the Naval Material Command, Commander Paul Petzrick, (CEC) USN.

"Liquid hydrocarbon" fuels—which the average person thinks of primarily as petroleum—have powered the U. S. Navy for most of this century. The reason is that they are convenient, efficient, and, up until recently, plentiful and relatively inexpensive. Most importantly, "natural crude" was readily available within U. S. national boundaries.

Navy planners must now seek alternative sources of energy if the Navy is to continue to carry out its missions. One major alternative that is being considered is the use of "synthetic fossil fuel" derived from coal, oil shale or tar sands.

Coal, of course, is one of the first fossil fuels used by man. It has been burned directly for centuries. But did you know that a fuel gas was made from coal almost 200 years ago? And that coal liquids were derived approximately 50 years ago by techniques known as pyrolysis or hydroliquefaction?

In World War II, *a major part of the German armed forces was fueled with liquid coal.* At that time, Germany had several synthetic fuel plants, with a combined output of about 100,000 barrels a day.

Since World War II, the use of coal as a synthetic fuel has dwindled because, in general, the cost has been too high. However, research in this area has continued:

- Since 1960 the U. S. Office of Coal Research (OCR) and various private energy companies have devoted much time and effort to perfect this synthetic fuel technology.
- Many new processes utilizing coal as synthetic fuel are now in the pilot-plant stage and could be producing liquid fuel on a commercial level within a few years.
- Of all sources of liquid fuel for the Navy, coal is a leading candidate because of its wide geographic distribution.

The use of *oil shale* for liquid fuels, discussed in the article on the preceding pages, also predates the use of natural crude oil. The earliest patent on oil shale processing was issued almost three centuries ago, in 1694. Commercial-scale oil shale industries existed in such countries as Australia, France, Sweden and Scotland until the 1950s, and oil shale is currently being processed on a çommercial level in Manchuria (China) and Estonia (U.S.S.R.).

- One of the most significant applications of shale-derived products is one that has been little recognized by the average person: *Shale oil was extensively used to power the Japanese navy during World War II.*

The availability of low-cost natural crude products made the processing of shale oil uneconomical, as has been the case with liquid coal; hence, the commercial-scale industry virtually disappeared. However, research and development efforts have been conducted in the U. S. since World War II.

A third significant source of synthetic crude is *tar sands*—a mixture of sand, water, and an organic bituminous material. Tar sands are found in the U. S., but developmental work has been concentrated in Canada. Canadian efforts to recover oil from tar sands began as early as 1897, although virtually all of the early development projects failed. Recently a Canadian oil company constructed a 45,000-barrel-per-day plant. This plant became operational in 1967 and has increased its daily production.

Until recently, the processing of tar sands into fuel products has been too costly. However, with the changing world energy situation, several new tar sands plants are being designed and could be in operation by 1982, depending upon economic factors.

Although processes for extracting liquid fuel from coal, oil shale, and tar sands have existed for many years, only during the last two decades have government and industry in this country begun intensive research efforts to develop new and more efficient processes, to improve the efficiency of current processes, and to lower the cost of the processing facilities. Success in these efforts, together with increasing natural crude prices, have now made all three synthetic fuel sources more competitive. The most recent development efforts have been directed toward building pilot plants to test the improved technologies before proceeding to build full-scale commercial plants.

Liquid Coal. In converting coal to liquid fuel, one of four processes is generally used.

- *Synthesis gas process.* This is a relatively simple method of converting coal to liquid, but is generally more expensive than other processes. It offers an increased control over the types of product manufactured, and would be preferred if some of the by-products could be used by industry as "feedstock," that is, to produce other chemical products.
- *Pyrolysis techniques.* This was reported on in the ALL HANDS article "Liquid Coal," (March 1974, page

4). The technique has been used to distill coal into coke, fuel gases, and liquid fuels on a commercial level for many years. Various techniques have been pursued by the U. S. Office of Coal Research and by private companies. One of the processes, COED, is typical and represents the most advanced state of the art. The COED process, however, is not currently economical. A fact in its favor is that fuel gas is a co-product, and if fuel gas were priced nearer to its true energy value, then the experts say the COED process could be used to produce fuels economically. This process, as well as those listed below, produces highly aromatic fuels which are more suitable as boiler or spark ignition engine fuels than as diesel or gas turbine fuels.

- *Catalytic hydrogenation.* This appears to be one of the most promising of the coal processes. It seems to offer higher overall thermal efficiency and probably lower costs. This is the process the Germans used most extensively during World War II.

In the early German processing, pulverized coal and hydrogen were allowed to react, in the presence of a catalyst, at particular pressures and temperatures. By varying the conditions and the choice of catalyst, it was possible to obtain liquid products that varied from a very heavy fuel oil to high-volatile aviation fuel and hydrocarbon gases.

In general, this process will yield about three to four barrels of products per ton of coal. Both private industry and the U. S. government are sponsoring "direct hydrogenation" projects, but most of the projects are just now moving into the pilot plant stage. Based on the present rate of progress, commercial-scale production will probably not be achieved for at least five years.

- *Solvent refining.* This process of converting coal, known as SRC, is a special-purpose technology that provides a uniform fuel (with a low sulfur content) for use mostly by utilities. Basically, it calls for mixing pulverized coal, hydrogen and an organic solvent (derived from coal), under pressure and temperature in a reactor. The coal is dissolved, most of the sulfur is filtered out, and the product is distilled to recover (a) the solvent, (b) a small amount of liquid product, and (c) a hydrocarbon fuel with a 350° melting point. The hydrocarbon fuel can be further treated for use as a hot liquid boiler fuel, or solidified for use in a solid-fuel boiler. To adapt this fuel for naval use would probably require refinement of the process.

Oil Shale. Oil shale conversion to liquid fuel is discussed in the preceding article. Several oil shale development projects have been conducted in the United States since World War II. All of these projects are trying to demonstrate the feasibility of the fuel oil recovery technology, using a pilot plant, with the aim of improving efficiency and cost effectiveness. Several commercial-scale projects are being planned, with the first significant production scheduled for 1978-80.

The prospects of recovery of shale oil have received considerable attention recently. Technology is still limited, however, and is not expected to have a significant impact for many years.

Tar Sands. A Canadian oil company has been operating a commercial-scale tar sands processing plant in Canada since 1967. That plant produces about 50,000 barrels per day of tars and "synthetic crude."

In this process, the mined tar sands are mixed with water and heated in rotating drums, the bitumen (tar) and sand are then separated by gravity, and the water is then removed from the bitumen in a centrifuge. The bitumen yields a distillate, which is further hydrotreated. The resulting crude is a clear, sulfur-free, versatile liquid which can then be processed into conventional products by normal refinery procedures.

In the United States, efforts to recover oil from tar sands have been limited to a project of the Department of Interior's Bureau of Mines and two small development projects in Utah.

The Navy has been closely involved in all areas of synthetic fuel research and development. Some of the highlights of Navy synthetic fuel programs are:

- Synthetic fuel from coal has been used to power USS *Johnston* (DD 821) on a successful sea trial. *Johnston* steamed from the Philadelphia Naval Base on the 1974 sea trial, and was the first ship in the history of this country to power its engines with coal-derived liquid fuel. The synthetic fuel was obtained from coal by a pyrolysis process.
- The Naval Ship Research and Development Center (Annapolis) has tested a sample of synthetic crude from coal and found it to be chemically and physically similar to No. 6 fuel oil.
- Coal-derived fuel is being tested in a 4000-hp gas turbine power plant of the type in *Spruance* class (DD 963) destroyers.
- An agreement has been made to supply 10,000 barrels of synthetic fuel to the Navy from the Navy Oil Shale Reserves early this year. From this synthetic crude, approximately 6000 barrels of refined fuel (mostly DPM and JP-5) will be used for testing.
- A gas turbine engine for the TH57 helicopter has been subjected to a 60-hour performance test, using JP-5 fuel refined from synthetic crude derived from tar sands.
- JP-5 fuel produced from oil shale (and tar sands) will be used in static tests soon to be conducted in the TF34 aircraft engine that powers the *Viking* S3-A aircraft.

There is a continuing interest in synthetic fuels in the Navy. The Navy has a representative on the source selection board for the first large demonstration plant to produce coal liquids through a program initiated in the Office of Coal Research. The Navy serves as the focal point for synthetic fuel research, development, and testing in the Department of Defense and represents DOD on the interagency task force for synthetic fuels.

—CDR Paul Petzrick, (CEC) USN.

NRS

The period 4 May to 6 June, commemorating the Navy-Marine sea-air battles of the Coral Sea and Midway, is the time for the annual call for donations to the Navy Relief Society (NRS).

Founded in 1904, the Navy Relief Society is the naval service's own organization for the relief of distress among Navy and Marine Corps personnel and their families. The annual call for contributions is designed to achieve two goals: (1) to educate eligible recipients about the availability of NRS assistance; and (2) to obtain necessary funds to continue NRS services.

Until recent years, the annual NRS drive had incorporated a general announcement of the services available to Navy and Marine Corps people. Ever-increasing demands on the society's funds, however, have prompted an earnest plea for assistance. In 1974, for example, NRS experienced its largest loan year in history. More than 6.5 million dollars was lent, interest-free, and over $1.1 million provided gratuitously to needy personnel. To meet this increased requirement, the society had to sell over $1.6 million in reserve fund assets.

This reserve fund has been built up by careful investment to the point where its income covers all administrative and overhead costs of the society and helps cushion the deficit caused by direct relief expenditures. The original principal of this fund was raised by civilian friends of the Navy and the Marine Corps in the early days of World War II and presented to NRS in 1942. The interest and dividends from this fund provide more than $1.7 million a year, thus ensuring that all individual contributions go entirely to help Navymen, Marines or their families.

Nevertheless, drainage of reserve fund assets weakens the society's position and increases a need for reinforcements. Officials quickly point out that NRS is not in any immediate danger, but they also emphasize that greater response to the call for contributions can only improve the society's ability to assist needy people and expand services.

The society did have tough sledding in early years. At the time of its formation, Navy and Marine Corps officers, their wives and prominent civilians who comprised the original membership each contributed $25 at the time of joining and made annual contributions thereafter.

For many years, the society received a portion of the gate receipts of Army-Navy football games. This source of revenue eventually became a major portion of the income. Admiral George Dewey, an early president of the society, commented in a letter dated 1 Jan 1910, that cancellation of the previous year's game at Philadelphia deprived the Navy Relief Fund of about $7000. He also mentioned generous contributions from the fleet in the amount of $2000 and asked for membership subscriptions to help keep the society afloat.

This was an era in which anyone who was down on his luck was down indeed. The society's files of aid given to Navymen and their families in the years preceding World War I record hardships that are difficult for most people to conceive today.

It was an era of rugged individualism in which the public at large gave very little thought to municipal care for the unfortunate. Benefits for veterans and their families were virtually nonexistent and rights and benefits, such as today's Navy and Marine Corps offer personnel and their families, were few and far between.

An early opportunity for NRS to alleviate hardships of Navy families came a few weeks after its incorporation in 1904 with a payment of $1695 to families of Navymen who died when the battleship *Maine* was destroyed in 1898 in Havana Harbor. The society provided basic maintenance for Navy widows and orphans and some were sent to vocational schools to make them self-supporting. For those who needed a temporary helping hand, NRS bought food for the hungry and fuel for cooking and for warmth.

As time passed, the society's needs for income increased and contributions were solicited from All Hands.

Navy Day carnivals were held at which donations were accepted and at which ships were dressed and illuminated. Guests were taken aboard and shown methods of Navy messing and berthing; how hammocks and seabags were stowed; how food was prepared and dishes were washed in the galley; and how the incapacitated were cared for in sick bay. Gun crews drilled and there were exhibitions which included street riot drills, wall-scaling and sham battles. At one carnival, there were four bands which provided a continuous flow of music all day and, at night, the carnival scene was lighted with searchlights and lanterns.

World War I increased the demands placed upon NRS, and it responded to the needs as it had since its founding in 1904. By this time, however, the society's financial capabilities were improving.

Since World War I, benefits for Navy and Marine families have been increasing and the nation has become more conscious of its debt to the men who fight to preserve its liberties. However, Navymen and Marines, like everyone else, still have emergencies for which they are unprepared.

Unfortunately, despite the benefits provided by law, there are still cases of hardship as, for example, when a father dies without providing for his survivors. Since 1907, NRS has received casualty reports of Navymen and Marines, both active and retired personnel. After a Navy or Marine Corps death becomes known, the society writes or calls the widow to offer assistance.

An outstanding example of the society's prompt aid to widows and orphans occurred in 1923, when 11 destroyers ran onto rocks and shoals off Point Honda on the California coast. Thousands of dollars were raised by the people of San Diego and other nearby communities and turned over to NRS for disbursement. Immediately after the disaster, NRS ascertained the financial condition of the dependents of those who died in the disaster and was able to distribute the funds to alleviate financial distress.

There have been numerous instances in which the society has helped families of Navymen who have gone to sea or Marines sent to quell problems without providing allotments for their families. Sometimes allotments have been made, but not received. The society stepped in with cash to keep wives and children "afloat" until money started coming again.

These, of course, are only a few examples of NRS assistance. The society's annual reports are filled with instances in which Navymen, Marines and their families

Below: Available to those who need them, free layettes are prepared for new babies by volunteers.

have been given assistance, ranging from moral support to substantial interest-free financial assistance and gratuities to help them over the rough road to self-sufficiency.

With 125 Navy Relief offices throughout the world, it's difficult for Navymen and Marines to be located outside shouting distance of help. Thus, when there is a genuine need, assistance can be obtained.

Typical reasons for which financial aid may be granted to an active or retired serviceman and his dependents, or a widow, minor orphan children, or truly dependent parents are:

- Basic maintenance due to delay or nonreceipt of emergency allotment or pending receipt of government benefits or other emergency situation which makes family resources temporarily inadequate but not extending directly or indirectly to regular supplementation.
- Travel in special cases of illness or death.
- Funeral expenses ($500 limit for basic funeral).
- Vocational training for widows and orphans in approved public and private schools where needed to make a living.
- Special care and training of handicapped children including temporary placement pending admission to an institution.
- Keeping children in public school.
- Special assistance to widows and dependent mothers over 65.
- Medical expenses not covered by Uniformed Services Health Benefits Program or Medicare—Social Service Amendments such as spectacles and eye examinations, prosthetic devices other than artificial limbs and eyes, hearing aids and orthopedic shoes, and well-baby care, such as immunizations and checkups.
- Medical expenses under the Uniformed Services Health Benefits Program limited to the patient's required contribution.
- Dental expenses for dependents for work leading to serviceable dental capability rather than ideal dental restorations.

Funds of the society are NOT available as a matter of convenience in situations such as the following:

- To assist in maintaining a standard of living incommensurate with the pay and allowances of the man.
- To finance business ventures, to purchase a home, or similar permanent investments.
- To finance vacations, leave or liberty (except when leave is for emergencies such as critical illness, a death or equivalent urgent situations).
- To pay debts contracted prior to entry into the service.
- To pay income or other taxes, interest or mortgages.
- To purchase, or pay debts created for, nonessentials, such as automobiles, television sets, and similar conveniences.
- To pay court fines or to furnish bail for servicemen.
- To finance marriage, divorce or adoptions (except in rare and critical situations).
- To provide regular supplementing of income for basic maintenance.

In addition, the society is unable to finance cases involving truly chronic illnesses or situations which require long-term commitments. It may, however, within certain limitations, assist in so-called chronic illnesses where reasonable and definite improvement may be expected within a predictable time, or for a temporary period pending permanent care by the use of other resources.

While the foregoing are typical of the more frequent situations in which aid can or cannot normally be rendered, they are by no means complete, and all cases presented are given full and sympathetic consideration. Attempt is made to resolve them on the side of liberality rather than parsimony. Necessity as compared to convenience is a deciding factor.

Thus far, most of the NRS assistance discussed has centered around financial aid, which may consist of a loan without interest, an outright gift, or a combination of the two, depending upon all the circumstances in a given case. Most times, financial assistance takes the form of a loan whenever repayment within a reasonable period is possible without undue burden. The repayment of loans enables the society to help others faced with similar situations. Repayment should be by allotment as this is the most convenient; however, the

Above: A smart shopper can often find useful, inexpensive items for the home and family at the Navy Relief Society's thrift shops.

society accepts cash or allotment in order to continue to be able to render service. In 1974, preliminary figures indicate a loss of over one million dollars, i.e., disbursements *vs.* receipts. Non-repayments of loans account for a large part of this loss which must be met by selling assets from the reserve fund thereby reducing future income.

NRS also provides many other types of assistance. These include:

- Layettes, made by volunteers, for new babies, for those who need them.
- Thrift shops, where articles of clothing and essentials may be purchased at rock-bottom prices.
- Children's waiting rooms at naval medical facilities.
- Counseling on financial management and referrals to community resources with special attention to the young serviceman and service family.
- Visiting nurses who visit mothers, newborn infants and the elderly in need of medical attention at home.
- An educational fund which provides opportunities for higher education to dependent children who might otherwise be unable to pursue their education beyond high school.
- Sponsor programs, such as Live Better for Less, Helping Hands, Toys for Tots, Motor Corps, and similar activities.

The work of the society is carried on by the headquarters office located in Arlington, Va., by 55 auxiliaries, by 53 branches and 17 offices of these auxiliaries. Some 6500 trained volunteers and 194 paid employees man the society offices.

Servicemen and their dependents and the dependents of deceased personnel living in the immediate vicinity of an auxiliary or branch should present their requests for assistance in person to the local office.

Eligible servicemen living in the Ninth Naval District—Colorado, Illinois, Indiana, North Dakota, South Dakota, Wisconsin, Wyoming, Iowa, Nebraska, Kansas, Michigan, Minnesota and Missouri—should apply to the Great Lakes Auxiliary, either directly or through the local Red Cross chapter.

Eligible personnel living in New York State, Connecticut and the rest of the Third Naval District, except in the immediate vicinity of the Connecticut Auxiliary and the 12 counties of Northern New Jersey, should apply to the New York Auxiliary, either directly or through the local Red Cross chapter.

All others should make application direct or through the local American Red Cross chapter or field director to Headquarters, Navy Relief Society, Suite 1228, 801 N. Randolph St., Arlington, Va. 22203, telephone area code 202, OX2-4904.

In emergencies when a Navy Relief Society or an American Red Cross office is not readily available, assistance can be provided through the facilities of the relief societies of the Coast Guard, Army or Air Force by reciprocal agreement.

The approximate average direct services given by the society annually are as follows:

Gratuities and loans converted to gratuities	$1,450,000
Visiting nurse service	389,000
Layettes, nurseries and special programs	322,000
Loans written off as uncollectable	327,000
	$2,488,000

The Navy Relief Society is the naval service's own private, charitable organization. It provides emergency assistance in time of need for Navy and Marine Corps active duty and retired personnel, their dependents, surviving widows and children. There is no field of human trouble in which the society has not helped.

Once each year, during the 4 May to 6 June annual relief drive, there is the opportunity to publicize to each new officer and man, and to remind every member of the Navy-Marine Corps team, that Navy Relief stands ready throughout the world for instant help to a needy serviceman or his family. The annual call gives every one an opportunity to contribute toward a better life for those shipmates, past, present and future, who may be less fortunate than we.

—JO1 Ken Testorff

Homeport Change...

Smooth Sailing For USS Piedmont Families

The 800-man destroyer tender USS *Piedmont* (AD 17) arrived in Naples recently to begin duty with the U. S. Sixth Fleet. She docked amid music from a Navy band, USO hostesses, and sign-waving wives and children. Although the ship was new to Naples, most of the families had been there for months.

How that happened is a tribute to the Navy's can-do attitude. Entering an unfamiliar country can be an unnerving experience at best. To come with armloads of baggage and kids, minus a husband, could turn into a nightmare.

Luckily for the wives, Navy officials foresaw that possibility and acted by setting up the Dependents' Assistance Team (DAT) in Naples to ease *Piedmont's* arrival problems. The team was formed from *Piedmont* personnel in Naples waiting to join the ship. The purpose of DAT was to make things easier for the wives.

The first two groups of wives arrived in Rome on 5 September and 23 October. Each group was met by a bus, refreshments and as much good advice about Naples as could be packed into the three-hour trip to their new home. When the bus arrived in Naples, the wives found hotel reservations waiting for them. They were welcomed and given briefings by personnel from the Naval Support Activity (NSA), Environmental Preventive Medicine Unit Seven, the Naval Hospital and DAT.

Language and art and culture classes, tours and information booklets were provided by the Human Resources Management Unit (HRMU) there. Earlier in the year the unit had sent groups to brief the men of *Piedmont*. The HRMU also provided the offices in which DAT was established.

According to Lieutenant (jg) Charles D. Mabry of DAT, "The team was set up to help in three basic areas."

The first area mentioned by Mabry was cutting "red tape in getting sojourners' permits, Temporary Lodging Allowance (TLA), ration cards, car registration, drivers' licenses, and household goods."

Mabry included house-hunting in the second area and helping with moving in the third.

The wife of Captain John T. Parker, commanding officer of *Piedmont*, acted as ombudswoman for the wives. Anne Parker remarked that the team "was set up so we wouldn't inundate NSA with our needs. It worked out just great."

When asked why the wives arrived so much ahead of the ship, Mabry answered, "The ship originally was due in August but was delayed because of problems during the yard period. Many of the families had sold their homes and gone to stay with relatives. But you can only stay with relatives for so long."

Mrs. Parker put the wives into several groups. "The first group came knowing the ship would be late. They came mainly because many of them felt it important that the children start school at the beginning of the school year."

She said the second group, the October arrivals, learned two weeks before the flight to Italy that the ship would be delayed again.

"They were faced with the decision whether to go without their husbands or to wait until the husbands would be in Naples. It was a decision that two adults had to make."

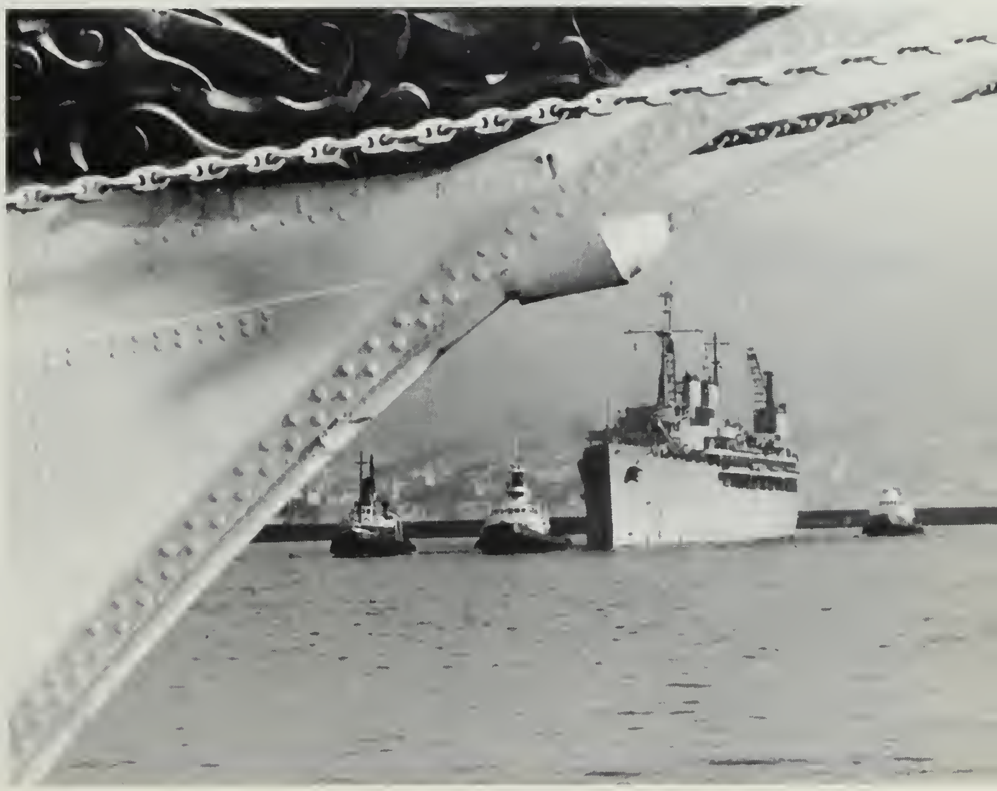
About half the wives made the flight; the third group arrived in December after the ship had reached Naples.

The wives faced several problems after arrival. Mabry stressed, "The fact that TLA is paid directly to the husbands made it hard on the wives who arrived low on cash. But we got fast help from Navy Relief and money also was wired from the ship." (See pg. 18.)

Looking back on the last few months, Mrs. Parker remarked, "We never dreamed we'd get as much help as we did."

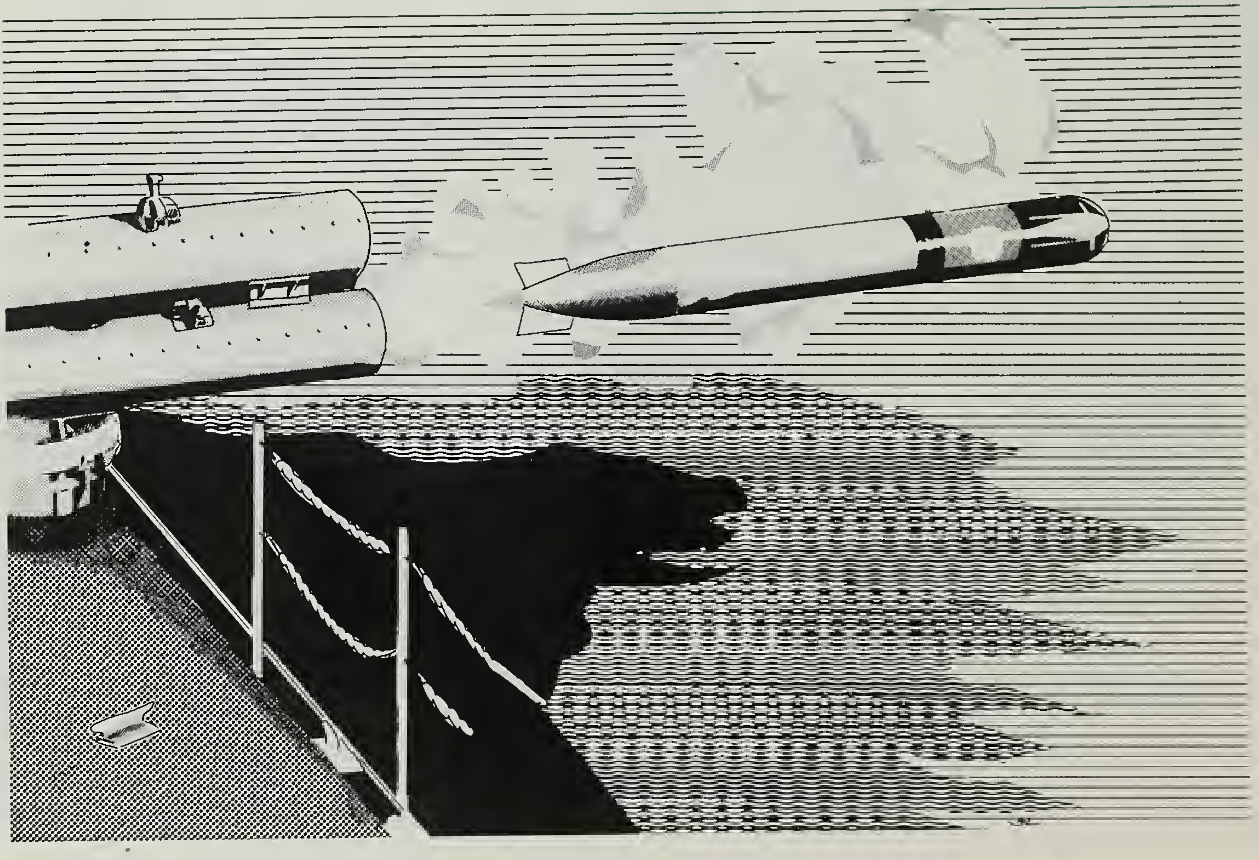
She summed up the situation with a rundown on some of the problems—"Things like coping with moving into strange apartments, the tremendous responsibility of signing your husband's money away, making your new home safe, depending on someone with a car to help you move your cabinets and furniture and getting transformers for everything! Now, what do I know about a transformer?" She may not have, but the Dependents' Assistance Team did, and that's what DAT's about.

Before the ship's arrival the wives met to prepare signs and banners. The sentiment expressed by youngsters waving the signs and the happy mothers greeting their husbands at the rails of *Piedmont* was, "Welcome Home."



Facing page: A welcome sight for the Piedmont crew was their families, waiting at the pier. Right: An Argentine naval training ship, Libertad, frames USS Piedmont, assisted by tugs, arriving in Naples.

ON THE SCIENTIFIC FRONT



COMPUTERIZED TORPEDO FIRING

One way to test a torpedo is to fire it. But, that costs a lot of money, both for the torpedo and for the ships, equipment and people involved. Besides, if the torpedo is lost, most, and possibly all, of the desired data is lost.

Solution: put the torpedo through a simulated run at the Naval Undersea Center in San Diego.

Simulated testing is nothing new in the Navy. It's been going on at the NUC Simulation Facility since 1951 when the facility was established. But, what is new is the manner in which the simulation is being performed faster than the eye can blink.

Today, high-speed scientific computer systems—a dual processor and digital computer systems—are used to gather more detailed simulation than ever before possible, according to L. Z. Maudlin, head of the NUC computer sciences and simulation division.

These two new systems were added to the computer and a group of analog computers already in the facility. The dual processor is capable of two computations every 300 nanoseconds (300 billionths of a second), which amounts to about six million computations a second. In layman's language, that means virtually every conceivable measure of effect felt by a torpedo on a simulated run to its target can be programmed through the computer to simulate conditions under which it might be operating, such as pressure and water temperature. And it can do it in a flash.

Maudlin explains that the facility operates on a three-point philosophy:

"First, we simulate the physics of what happens in the water. Second, we use as much of the actual hardware as possible so that we can discover any deficiencies. Third, we use the engineer (designer of the torpedo) as a partner in the analysis."

The center can then question information during the program rather than waiting until all data is gathered.

The facility initially did evaluation work only. Now, with its new capabilities, the simulation computer complex will be used to assist Submarine Development Group Two in its vital tactical work next year.

A total of 60 NUC personnel man the computer facility, 25 of them employed in running the dual processor high-speed system and although the data gained from a simulated run can never really be as accurate and comprehensive as the water run, it can significantly enhance the engineer's ability to understand what is happening under controlled laboratory conditions at a much smaller cost.

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Facing Page: Artist's conception of shipboard torpedo firing. **Top:** Electronics Engineer Don Robinson punches in a program for a simulated run of the Mark 48 torpedo. **Above:** Naval Undersea Center's sophisticated computer center is used for support of scientific programs, management data processing, and real-time simulation, which has been used in developing every new torpedo since 1951.

ROCKET-POWERED HELICOPTER

It's as easy to operate as a motorcycle, it's pollution-free, and it's a one-man, rocket-powered helicopter that has been recently delivered to the U. S. Navy.

It's called the Minicopter, the first of three to be delivered to the Navy, and is designed to fold into a compact package so that it may be paradropped to downed pilots in enemy territory. Weighing less than the average man, the Minicopter is capable of lifting three times its own weight. With the addition of a small engine and push propeller, the next two will be capable of missions of up to 250 miles.

The Minicopter is powered by miniature half-pound rocket engines faired into each of the two blade tips. They convert hydrogen peroxide fuel into steam and oxygen—thus causing no air pollution and making less noise than conventional helicopters.

A single flight control handle called the "mono-trol" converts control of the helicopter from the complex use of both hands and feet to a simple, one-hand operation. The level of pilot training required is expected to be not much more than that which is required to learn to ride a motorcycle.

NEW WAY TO EXTEND BATTERY LIFE

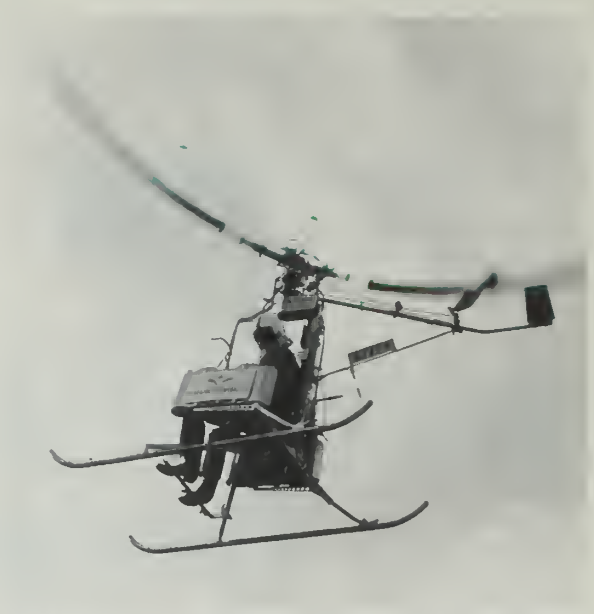
Scientists of the Naval Underwater Systems Center (NUSC) have discovered a way to improve electrodes and thus extend the life of zinc-silver oxide cells (batteries). This is an important find since this type battery can hold a greater charge than other rechargeable batteries, but is much more expensive than most.

The NUSC study was concerned with electrodes and their individual contribution to the battery cell. Of the two electrodes, the zinc electrode is much less stable than is the silver oxide electrode.

The zinc electrode tends to react with the highly alkaline battery electrolyte (40 per cent potassium hydroxide solution) and, as the battery is discharged to provide electrical energy, it is changed to zinc oxide, which is highly soluble in the alkaline electrolyte. The zinc battery plate suffers considerable damage during repeated cycles of discharges and recharges.

In trying to solve the problem, scientists at the Materials Laboratory at NUSC discovered a way to fabricate zinc electrodes which are not so easily damaged. The NUSC plates are made by mixing a small amount of neoprene latex (a synthetic in liquid form which dries to a rubbery substance) with zinc dust. This mixture is spread and pressed onto a silver screen-like grid, then dried, and the electrode plate is complete.

The improved electrode has provided a way to extend the cycle life of zinc-silver oxide cells. Testing in full-sized torpedo propulsion cells has demonstrated that the plates show essentially no damage after repeated discharges and recharges. This additional cycle life can be translated directly into higher reliability of batteries, plus dollars saved.



Above: Pilot Jerry Alexander test flies an Aerospace General Company mini-copter near the Pentagon. Facing Page: This deep-sea anchor, successfully tested in depths to 12,200 feet, is designed to provide a practical, reliable and efficient mooring for deep-ocean systems, surface and subsurface structures.

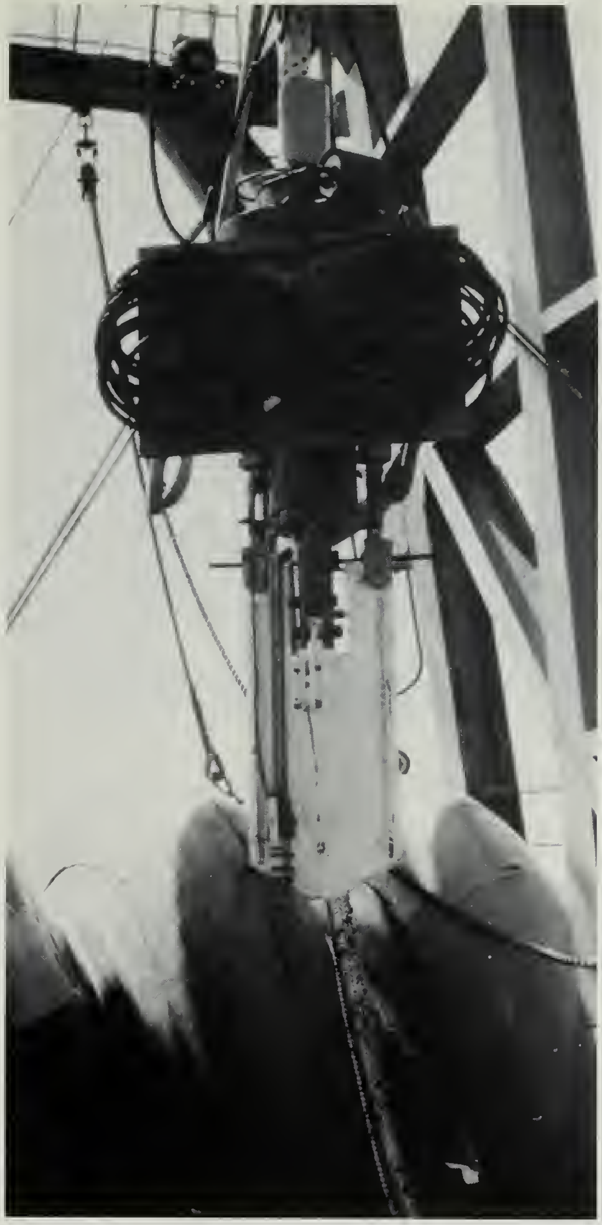
HIGH QUALITY FIREFIGHTING WATER

The effectiveness of water for firefighting can now be improved thanks to a spinoff of polymer research conducted at the Naval Undersea Center (NUC) under the sponsorship of the Office of Naval Research.

The problem has been that a water jet leaving a fire hose nozzle is broken up by air friction and scattered into droplets which flare out to form a cone-shaped spray. This reduces its extinguishing ability. During tests aimed at reducing turbulent friction of water in fire hoses, polymer was injected into the water and researchers discovered that the polymer also reduced water jet dispersion.

Further investigations using high speed cameras to photograph water being sprayed from a nozzle were then made. They showed that a jet structure is initially made up of a smooth, even flow, but a series of eruptions then occurs on the surface of the jet, and spray droplets begin breaking off as an oscillating wave region is formed. Introduction of polymer at concentrations of 10 parts per million (ppm) showed a substantial reduction in formation of spray droplets. At concentrations of 50 ppm and above, spray formation ceased. At 200 ppm the polymer forms filaments which actually link all the drops together. Polymer, then, makes the water more coherent and more effective in fighting fires.

A previous NUC polymer research spinoff was achieved in 1972 when it was discovered that polymer solutions reduced turbulence of blood flow and thus the work of the heart during transfusions and in cases of persons suffering from atherosclerosis.



DEEP-SEA ANCHOR

In the latest of a continuing series of deep-ocean anchoring tests, the deep-water anchor developed by the Civil Engineering Laboratory (CEL) at Port Hueneme, Calif., has been successfully tested three times at depths between 8000 and 12,200 feet.

At the 12,200-foot depth, the propellant-actuated anchor, fired into the ocean floor by an explosive charge, held 48,000 pounds, more than twice its design capacity. It is designed to hold 20,000 pounds indefinitely in all types of seafloors from soft clay to hard rock.

Two of the recent tests were in soft clay at 8000 feet off the East Coast. The test at 12,200 feet was in stiffer, deep-ocean (hemipelagic) clay.

For these tests a sediment fluke, one and a half feet by three feet, was fired harpoon-style into the seafloor, using a propellant charge of 3.2 pounds of Navy Pyro at a maximum speed of 400 miles per hour or 590 feet per second. The key to the anchor's launch system is a sawed-off surplus Army 90mm gun barrel (combined with steel pipe to minimize recoil action), an arming device, and electronics to fire the propellant.

CEL project engineer Robert J. Taylor said that, although the anchor is considered functional, additional reliability data is required beyond that gathered in the more than 20 deep-sea trials conducted so far. During this year, additional data will be obtained from tests in a variety of sea-floor materials.

According to Taylor, the overall objective of the deep-water project is to develop a practical, reliable and efficient anchor to moor deep-ocean systems, surface and subsurface structures. The anchor may also be adapted to moor various platforms, such as instrumentation devices, buoys, weather stations and research vessels.

CONCRETE FOR DEEP-SEA BUILDING

Problem: Find a building material for deep-ocean construction which is inexpensive, corrosion-resistant, reacts well to compression and can be fabricated at thicknesses which provide buoyancy control. The possible solution: concrete. But how does concrete react in seawater?

To find the answer to this question, the Navy's Civil Engineering Laboratory (CEL), Port Hueneme, Calif., began a 10-year research project in 1971. Eighteen concrete spheres were placed into the ocean at depths of from 2000 to 5000 feet. (See ALL HANDS, April 1972, p. 30.) Each sphere weighs more than 4000 pounds, has an outside diameter of 66 inches and has four-inch-thick walls. This is the first time such a large scale test has been programmed over a prolonged period of time.

Inspections made recently have revealed some interesting data. The structures contained less water than was originally expected. The average seepage into eight epoxy-coated spheres was about six gallons each, and for the remaining spheres, which were uncoated, about 12 gallons each. Pressure chamber tests had indicated twice this permeability for the spheres. Inspection also showed that seawater seepage decreased with time.

Not all of the spheres have escaped failure. Of the 15 inspected within the first 30 months of the project, two had imploded (one at 4330 feet, the other at 3725 feet) and a third had developed a slow leak and had sunk to the ocean floor. The seven deepest spheres are also expected to fail eventually because ocean pressures at those depths approach the long-term failure pressures of the spheres. The sustained loads will cause them to implode under static fatigue.

The CEL is the only laboratory conducting research of pressure-resistant concrete structures for deep-ocean construction and considers the material ideal. Some engineers believe that within 15 years large concrete structures with diameters up to 100 feet will be built on the ocean bottom.

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SPACEMEN TO TRY X-RAY EXPERIMENT

After the historical linkup between the *Apollo-Soyuz* spacecraft set for 15 July, Russian and American spacemen aboard the satellite-laboratory will conduct a series of experiments and observations. Among them is an X-ray experiment developed by a team of scientists at the Naval Research Laboratory (NRL) in Washington, D. C., which has the spacemen scheduled to produce a detailed map of celestial X-ray emissions in a region of space where no satellite observations have yet been made.

Developers Dr. Seth Shulman and Gilbert Fritz, of the Laboratory's Space Science Division, say the map will make it possible for scientists to pinpoint and examine new X-ray sources and compare them with known sources, such as radio loops and supernova (extremely bright star) remnants. Further studies may reveal the origin of the emission to be either within or outside of the Milky Way galaxy, of which our solar system is a part.

The NRL X-ray detector will also be used to observe the earth, in addition to scanning space. These terrestrial observations should enable the astronauts to detect atmospheric X-ray emissions connected with the earth's auroral activity (northern lights) and particle precipitation—during times when the earth's magnetic field is disturbed by particles ejected from the sun toward the earth.

The NRL research team reports that these studies may provide a wealth of new information on the emission mechanisms which produce some of the most exciting phenomena in high energy astrophysics. Previously, these X-ray studies have been flown only briefly on small sounding rockets. However, this X-ray experiment is expected to last up to 10 days.

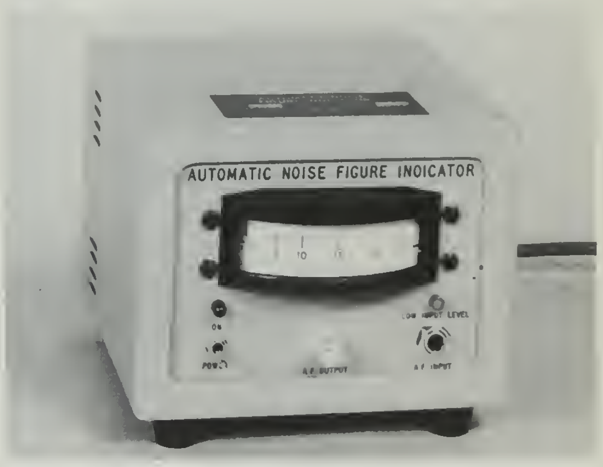
IS THE RADIO WORKING?

The skipper needs to know if the radio is working—especially during deployments and Fleet exercises. The technique of finding out has been for a technician to lug a bulky signal generator to various parts of the ship in order to measure sensitivity of the many receivers. Once the gear is in place, actual measurements are a time-consuming process.

In response to this need for a quick, simple means of determining radio receiver sensitivity, the Naval Electronics Laboratory Center (NELC), San Diego, has developed, and is now testing in the Fleet, the Automatic Noise Figure Indicator (ANFI). This small, hand-held, off-line test instrument automatically and continuously measures and displays the noise figure of most common Navy radio receivers.

To use the ANFI, a technician needs only connect it to the receiver to be tested and read the meter. Technical knowledge for its use is minimal and the test, which requires an hour or more to be made with present equipment, can be completed in two minutes. Additionally, the cost of the ANFI is one-third of the cost of present equipment and it requires a minimum of support and maintenance.

With the ANFI a skipper can determine quickly and reliably the operational status of his communication receivers.



A GOOD WAY TO PRODUCE NITROFORM

A method of converting a pollutant by-product into a highly valuable chemical has been developed by scientists at the White Oak Laboratory of the Naval Surface Weapons Center in Silver Spring, Md. The product, nitroform, is required for high-energy missile propellants. The scientists developed nitroform while studying an air pollutant, tetranitromethane (TNM), during an antipollution project. They found that TNM, when isolated from exhaust gases emitted during the manufacture of TNT, can be recovered as a watery solution of nitroform, highly suitable for use in preparing high-energy propellants, and greatly in demand.

Processing units installed at plants involved in the manufacture of TNT, the scientists say, could produce several million pounds of the product each year and at the same time satisfy pollution controls.

HEALTH RESEARCH CENTER EXPANDED

The Navy Medical Neuropsychiatric Research Unit in San Diego, Calif., has been redesignated the Naval Health Research Center with expanded responsibilities for investigating problems of physical and emotional fitness for service in the U. S. Navy. Only emotional or psychiatric problems were previously investigated.

The center is under the command of Captain David R. Ten Eyck, Medical Corps, and is part of the Naval Medical Research and Development Command. It will coordinate research activities in six divisions: environmental and social medicine; psychophysiology research; biological sciences research; stress medicine research; health occupations research; and prisoner of war studies.

MOVIE STAR'S EX-YACHT GOES NAVY

The Naval Postgraduate School's oceanographic ship *Acania* is a familiar sight around Monterey Bay for the ship is now used as a tool for instructing the school's students. In the early 1930s she was the diesel-powered yacht of a well-known movie star (the late Constance Bennett, of the famous stage and screen family).

For most of her life, however, the 126-foot, teak-decked *Acania* has been put to more utilitarian pursuits than those for which she was built. During World War II she saw action with the Coast Guard and was acquired in 1957 by the Stanford Research Institution. In 1969, she was turned over to the government and, in 1971, assigned to the Naval Postgraduate School.

She now "provides a platform in direct support of the oceanographic teaching and research efforts at NPS."

Acania is manned by a crew of six and her cruises vary in length from two hours to two weeks. The students on board have studied the physics, biology, chemistry, geology and marine ecology of Monterey Bay to about 400 miles into the Pacific.

NPS researchers often work jointly on projects with scientists from the Office of Naval Research, Stanford University, Scripps Institution of Oceanography, Cornell University and other organizations. Civilian organizations such as the Association of Monterey Bay Area Governments also support *Acania* in her studies of the effects of pollution in the bay and on its plants and animals.

The Bay provides a particularly fertile area for *Acania's* research because of its great variety of marine life and its huge underwater canyon. *Acania* regularly is used in sampling bay water to determine circulation patterns. Her researchers also measure levels of methane and carbon monoxide gases dissolved in seawater in the shallow part of the bay. Other projects involve ocean acoustics, interaction of ocean atmosphere and ocean currents, meteorological research and fog prediction studies.

The name *Acania* is a variation on a Spanish word meaning "to be of excellent quality or great worth." The students and faculty of the Naval Postgraduate School think she is just that.

NRL LAB PROBES GREEN FLAME MYSTERY

A team of Naval Research Laboratory chemists in Washington, D. C., conducting combustion research, has discovered the existence of a "green flame" phenomenon closely associated with the blue and hot flames. It is considered an important key to understanding the transition from the blue flame to hot flame, in research aimed at finding ways to counteract spontaneous ignition problems.

The scientists said that the "green flame" evolves from the blue flame when the oxygen-to-fuel ratio is slightly increased. Although the temperature of the green flame is not appreciably higher than that of the blue flame which has a range of from 400 to 800 degrees Centigrade, they added, the chemical processes occurring resemble hot flame reactions which register more than 1000 degrees Centigrade.

They gave the following example: Ions and ultraviolet emission from "excited" carbon dioxide have been observed in the green flames. These phenomena are common in hot flames, but are not observed in the cool or blue flames. The chemists have dubbed their new discovery the "transition flame."

Reactions show that atomic-oxygen processes, characteristic of hot flame, first become important at lower temperatures in the green flame zone.

PUTTING GOLD TO GOOD USE

At a time when many people are considering speculating in the gold market (and a lot more have given up the idea as being too risky as the price of gold fluctuates every day), there's at least one place where the value remains constant, Yokosuka Naval Base's dental prosthetics laboratory.

At Yokosuka an average of about three ounces of the precious yellow metal is turned into crowns, bridges, inlays or other oral restorations each month. In this form, the gold is more than a monetary substance. It is also a priceless aid to dental health.

"It is the best material for the job," said Dental Technician 1st Brian Hershey. "Gold is one of the most corrosion-resistant metals, so it stands up in the constantly wet environment of the mouth. It is also one of the most easily shaped, so it's ideal for the work we do in the prosthetic lab."

The five dental technicians who work in the laboratory, attached to the prosthetics department of the Naval Regional Medical Center Japan Dental Service, use a complex process to mold about 40 gold oral appliances a month. The gold comes to the lab in mini-ingots called pennyweights. Each pennyweight is a thin sheet about half the size of a regular postage stamp and weighs exactly 1/20th of an ounce.

Though sizes vary greatly, the average appliance requires about two pennyweights.

Stringent controls are placed on the use of gold. Each month an inventory board, made up of three doctors who are not connected with the metal's use or distribution, convenes to check stocks and records. All gold must be accounted for to the last grain—a grain is equal

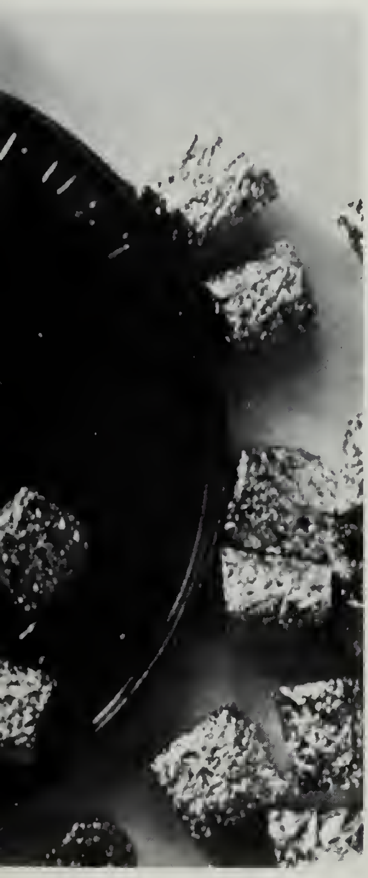
Below from left to right: A gold pennyweight on a fingertip. Gold foil, used for certain types of restorative fillings, is compared to a penny. An artificial tooth of exact dimensions specified by a dentist. Right: Dental Technician 1st Brian Hershey weighs a piece of gold using the laboratory's precision weights and scales.

to 1/24th of a pennyweight, or 1/480th of an ounce.

Even though gold is ideal for dental work, its cost is sometimes prohibitive even for health purposes. At Yokosuka, and elsewhere, lower cost substitutes are becoming more often used as funds become more scarce. One substitute is a chromium cobalt alloy, which is far less costly than gold and equally corrosion-resistant. This alloy is harder to mold but it is stronger. The alloy is therefore more suited for building larger appliances for structural besides economic reasons.

If gold prices continue to climb and if individuals in the U. S. begin amassing private stocks, gold dental devices may become a thing of the past. But for now, patients whose cases require it, can play the gold market from a dentist's chair at Yokosuka.

—Story and photos by JOSN Tim Carney



WOMEN WITH NAVY WINGS

First For LT Barbara Ann Rainey

In early 1973, then Secretary of the Navy John Warner announced that aviation training for women would begin that spring. The initial group consisted of four women officers on active duty and four women who would soon be entering Officer Candidate School.

Of this number, six went on to become naval aviators and wear their Navy wings today. They are:

- Lieutenant Barbara Ann Rainey, a native of Bethesda, Md., and a graduate of Whittier College, Calif. Before becoming an aviator, she served on the staff of the Supreme Allied Command, atlantic, in Norfolk, Va. She is currently at VR-30, homeported in Alameda, Calif.
- Ensign Anna Marie Fuqua, of Williamsport, Pa. She is a graduate of the University of California at Santa Barbara, speaks fluent Spanish and holds a private pilot's license. She is currently attached to HC-6, homeported in Norfolk, Va.
- Ensign Joellen Drag, of Castro Valley, Calif. She has a political science degree from California State University at Hayward and is now assigned to HC-3, homeported in Coronado, Calif.
- Lieutenant Judith Ann Neuffer of Wooster, Ohio, and a graduate of Ohio State University. Before earning her wings and assignment to VW-4, homeported at Jacksonville, Fla., LTJG Neuffer served with the Combat Direction Systems Support Activity in San Diego, Calif.
- Lieutenant (jg) Jane Skiles, of Ames, Iowa. A graduate of Iowa State University, she was selected for flight training while attending Officer Candidate School in Newport, R. I. Her current assignment is VR-24, homeported in Rota, Spain.
- Ensign Rosemary B. Conatser, of San Diego, Calif. She is a graduate of Purdue University with a degree in aeronautics and, upon entering the Navy, she held commercial and flight instructor certificates, instrument rating, multiengine rating, flight instrument instructor rating and 620 hours of flying time. ENS Conatser is now assigned to VC-2, homeported in Oceana, Va.

Reinforcements are already undergoing flight training at Pensacola. These include: Ensign Linda E. Vaught, Ensign Mary L. Jorgensen, Ensign Mary C. Giza and Ensign Catherine Mills Gehri.

Following rigorous courses in aerodynamics, engines, swimming, survival training, physical education and, of course, actual flying, these women, too, will be ready to bolster the ranks of their predecessors.

Following these are yet four more women who want to earn their places in the sky. They are Donna L. Spruill, Pamela A. Hicks, Jill E. Brown and Jean F. McCaig. Upon completion of their current course of study at Officer Candidate School, they, too, will move into the flight training program at Pensacola.

Having overcome the initial shock stemming from woman's entry into "the man's world," Navymen in general are welcoming the idea of sharing their work, their problems and goals with the women in the Navy. The aviation field is but one example of what is happening all over the Navy.

Women are playing a greater role, and their responsibilities are increasing in areas heretofore unknown to them. Here are samples of women in naval aviation.

In these days of female pioneers, Lieutenant Barbara Allen Rainey has earned the distinction of being the Navy's First Woman of Aviation.

Less than a year after completing Flight School at Corpus Christi, Tex., and becoming the Navy's first female aviator, LT Rainey has set another precedent by becoming the first of her sex in the Navy to qualify as a jet pilot.

She is attached to Fleet Tactical Support Squadron Thirty (VR 30) at Naval Air Station, Alameda, Calif., and will be flying the T-39 jets by which that squadron transports ferry pilots and also uses for special VIP flights.

When LT Rainey first arrived at her present duty station she chose to fly the C-1s and the sleek, six-passenger, two-pilot T-39s. Comparing the T-39s to the large C-9s which VR-30 also flies, LT Rainey says, "It's the difference between a limousine and a sports car. I much prefer the sports car feeling I get flying these beautiful planes."

Qualifying as a third pilot of the T-39s required her attending the Rockwell Corp. Flight Safety School in St. Louis, Mo. After that she had to complete the VR-30 flight syllabus, which consisted of six familiarization flights.

LT Rainey was commissioned an ensign in 1970. Before volunteering for flight training she was a communications watch officer on the staff of the Supreme Allied Commander, Atlantic, in Norfolk, Va.

At Corpus Christi she completed flight training with a total of 230 flight hours. During the instruction, all of her flights were flown satisfactorily and without the requirement for any extra instruction to complete the course. She has also been "field carrier-qualified" and completed the necessary requirements to have gone on to the training carrier and actually qualified aboard ship.

LT Rainey has been a doer all her life. The daughter of a retired commander, she was a member of her high school's band and was president of the school's Girls' Recreation Association besides being named as outstanding athlete. She was also a member of the student body council, the National Honor Society, California Scholarship Federation and other student organizations.

While attending Long Beach College, she was on the dean's honor roll during all four semesters and graduated with highest honors. She was an honorary member of Phi Beta Kappa, played intercollegiate sports and was active in the college recreation association.

At Whittier College she was a member of the Thalian Society and actively participated in intercollegiate sports. She received her bachelor's in physical education from Whittier in 1970.

She is married to Lieutenant (jg) John C. Rainey, a 1972 Naval Academy graduate, who is currently assigned to VP-46, Naval Air Station, Moffett Field, Calif.; they live in Fremont.

LT Barbara Allen Rainey, a woman who seeks challenges, has one remaining goal that no female aviator has yet to achieve—she hopes that the day will come when she can land on the deck of a Navy carrier.

—By JO3 Will Larsen

Facing page: LT Rainey, first Navy woman jet pilot, in cockpit of T-39. Below: LT Rainey views the world from pilot's seat.

LT Judith Ann Neuffer

Until recently, it took men to handle one particularly tough breed of female—the hurricane.

But for the past 10 months Navy Lieutenant Judith Ann Neuffer has been demonstrating that "men only" is no longer the rule when it comes to hurricane hunters. As the first female with the Navy's Hurricane Hunter Squadron at Jacksonville, Fla., she's met the challenge of flying in, out, over, under and through the world's most destructive storms.

The famed hurricane-hunting squadron is on its way into history, since the Navy announced it will be disestablished. The scheduled date is at the end of this month, when the squadron's aviators will bid farewell to one another and head on to new duty. But the memories of this kind of flying will remain with LT Neuffer as an experience of a lifetime. What has it been like?

"I was a little apprehensive at first," said Judy, the first woman to fly through a hurricane, "but for the most part I spent my time concentrating on what I was doing."

The five-foot, seven-inch brunette brought the four-engine P-3 *Orion* aircraft through the storm without mishap but with her nerves slightly frazzled. "All I could see was a white wall of clouds," she said of her first hurricane flight. But now she agrees with her skipper, Commander Richard W. F. Sirch. "We like to say it's been a 'routine experience' for us," he said.

Judy came to "the toughest noncombat flying job in the world"—according to her skipper—by way of Wooster, Ohio, Ohio State University and the Navy's rigorous flight training program.

Above: LT Neuffer and LT Fred Krift stand beside WP-3A Orion.
Below: LT Neuffer inspects aircraft during preflight check.

As one of the first group of eight women to be admitted to Navy flight training, she reported to the Hurricane Hunters after completing tough physical conditioning and intensive inflight instruction in various aircraft.

Although Judy has proven her ability to fly with the elite Hurricane Hunters, she still has problems outside the squadron convincing people that she is, in fact, a female Navy pilot.

"Nobody thinks I'm a pilot," she said of her experiences, stepping down from the plane after a flight. "They look at my green uniform and black boots and think I'm a nurse along for the ride."

Judy credits her lifelong desire to fly to her family. Her father, a veteran fighter pilot of World War II, taught her how to fly a Piper Cub at the age of 16. From then until she entered Navy flight training, her life revolved around airports and the people and machines that populate them.

When Judy and her fellow officers take off to inspect their last potential hurricane in the Caribbean, they do so knowing that wind speeds in excess of 150 miles per hour, blinding waves and rain, downdrafts and turbulent eddies may be encountered.

But for Judy, the flight will be routine. "Some day I'll be an aircraft commander," she says with conviction. The men who fly with her agree.

After all, anyone who takes on a hurricane is probably willing to take on just about anything.

ENS Anna Marie Fuqua

Helicopter Combat Support Squadron Six recently had its newest aviator report aboard, Ensign Anna Marie Fuqua. The petite, brown-haired, 24-year-old pilot arrived at HC-6 determined to fit right in with her male counterparts.

Surprisingly ENS Fuqua does not come from a Navy- or aviation-oriented family. Her father was a civil engineer and the family traveled extensively.

It was during one of those moves that she decided to attend the University of California at Santa Barbara. Upon graduation from UCSB she was still undecided as to what she wanted to do with her life—although a naval career appealed to her. She cited good management training, equal opportunity and equal pay as reasons for considering a career in the Navy.

In November 1972, while in Washington, D. C., Anna Marie talked to a Navy recruiter about her chances of pursuing a career in the Navy. It was then that she first learned of naval aviation for women. The recruiter told her that the Navy was looking for female aviators and he asked her if she was interested.

Since she already had a private pilot's license, Anna Marie knew about the exciting challenges associated with aviation and jumped at the chance to become one of the Navy's first female aviators.

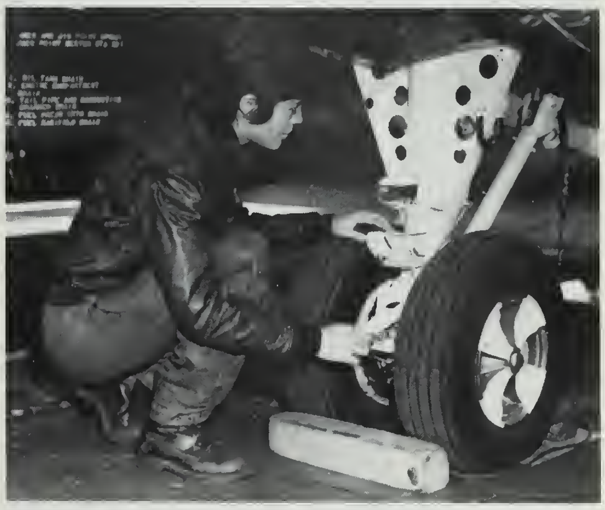
She was sent to Officer Candidate School for four months and graduated in May 1973. Following this, she reported directly to Pensacola, Fla., to begin her flight training and she earned her wings of gold in May 1974.

Anna Marie reported to HS-1 for replacement air group training in Jacksonville, Fla., where she learned to fly the H-3 helicopter. She finished her training in September 1974 and took leave before reporting to HC-6.

During this leave period, Anna Marie was married to LT Harry Fuqua, who is also a naval aviator. He is currently stationed with VRF-31 in Norfolk, Va.

ENS Fuqua hopes that some day she will be allowed to land on combatant type ships and that perhaps she can get involved in ASW work. Until then, she busies herself with her scheduling and training job in HC-6. The squadron, headed by Commander John W. Osberg, is a unit of Tactical Support Wing One.

—By LTJG G. L. Kaden, photos by Frank Palmitesso and Alice Lennon



Above: ENS Fuqua and LTJG Kaden discuss area charts before a flight. Below: ENS Fuqua performs preflight check on the H-3. Bottom: Female pilot receives thumbs-up from HC-6 skipper, CDR John W. Osberg.

ENS Joellen Drag

"Sometimes the men in the control towers can't believe their ears when they hear my voice over the radio."

Ensign Joellen Drag, a woman in a world of men, is one of the Navy's first women helicopter copilots. The men in the control towers had better get used to it.

Joellen and a dozen or so other women have either entered or have completed naval aviation training. They've taken the necessary tests, passed the physicals and completed what many believe to be the toughest aviation training in the world.

The 24-year-old blonde is a graduate in political science from California State College in Hayward. She completed four months of Officer Candidate School in Newport, R. I., before reporting to the Naval Aviation Schools Command, Pensacola, Fla.

After Pensacola and its rigorous flight instruction, survival training, and hours and hours of practice, Joellen reported to the North Island Naval Air Station, San Diego, Calif., and helo training with Helicopter Support Squadron Three (HC-3). All of this had its good and bad moments.

"Learning the incredibly complicated controls with the hundreds of switches, dials, meters and flashing lights was the toughest part," she said.

The fun part was the aerobatics—loops, rolls, spins and wingovers. "I never got sick," she said, "but I got some of my instructors a little upset when it was my turn to bring the aircraft up smoothly from a crazy position."

Joellen is pleased she decided to take the rough road towards becoming a Navy pilot. "My hours are long but I feel more professionally oriented than I would with a lot of jobs in the civilian world," she said.

"Besides, I'm part of a team, not just a woman."

Nor are her parents disappointed in her career choice. "My mother wishes she were 30 years younger." Her father, a retired commander, proudly pinned the wings on her uniform last April as she was graduated from flight training.

Joellen takes seriously the slogan "Join the Navy and see the world." One day she hopes to be stationed in Japan or the Republic of the Philippines.

She occupies her off-duty hours with a "promising thoroughbred mare" she hopes to train and enter in some shows in a few months.

ENS Drag says that it's too early to decide if the Navy will be her career but for a woman ensign who likes helicopters, there's not much she can't handle.

—Photos by JO3 Susan M. Fisher.

Facing page top: Even aviators become involved with paperwork. Facing page left: ENS Drag listens intently. Facing page right: ENS Drag performs preflight check. Right: The lady aviator climbs aboard Sea Knight helo. Below: ENS Drag crosses parking strip to board helo for another training flight.

CNO SETS FIVE LONG-RANGE PLANNING GOALS FOR THE NAVY

Since becoming Chief of Naval Operations, Admiral James L. Holloway III has consistently stressed the importance of an effective chain of command. He has publicly and privately stated his firm conviction that "there exists a need for individual involvement at every link in the chain--from seaman to admiral--to solve the problems we face."

To date, he has held two working conferences with the Fleet Commanders-in-Chief and from these sessions have emerged the five major goals around which all Navy planning is proceeding. Knowledge, understanding and support of these goals at all levels down to the newest recruit are important because, in the words of Admiral Holloway, "Profound statements have never solved problems--people have--not because of a press release by an admiral, but because individuals have worked together, each contributing his specific talents, to carry out the tasks assigned to a ship, squadron, or supporting unit. For organizational goals to have real significance, they must also be the personal goals of the individual in a work center." The five major goals listed by the Chief of Naval Operations are:

- Readiness - Overall fleet and individual unit readiness is our most important goal. The only true measure of the Navy's value to the nation shall always be its ability to respond on short notice to carry out its missions--whatever the place, time, or circumstance.
- Flexibility - Perhaps the major value of modern naval forces is their unique flexibility. Recent events have clearly demonstrated the worth of a Navy capable of responding to a wide spectrum of tasks ranging from the projection of national power for the protection of American citizens and interests, to humanitarian missions resulting from natural disasters or accident. Naval power can be moved rapidly and applied in precise quantities. Use of third country air space or territory is not required. Because it is impossible to predict accurately in every instance where or how the Navy will be called upon to respond, we must zealously guard and pursue the skills, concepts and capabilities that contribute to maximum flexibility.
- Offensive Capability - At the very heart of deterrence is the self-evident statement that nobody starts a war he expects to lose. Our ships and aircraft must be able to credibly demonstrate an ability to inflict unacceptable losses upon any potential enemy. A clear realization of this ability by potential enemies will significantly contribute to the prevention of a conflict.
- Balance - Without proper balance, a military force becomes relatively easy to counter and flexibility of action is reduced. Therefore, no single area of naval warfare--aviation, surface, submarine, amphibious, or support--should be excessively emphasized at the expense of others.
- Personnel Professionalism and Stability - The first four goals listed are those which the nation has the right to expect. The achievement of these goals lies in the hands of people. Therefore, every man and woman must strive for the highest possible degree of personal pride in work and professionalism. This requisite professionalism cannot be achieved without constant emphasis on stability in our daily lives. Programs which develop professionalism and stability must receive the highest priority because there is a double payoff--to the individual and to the unit in which he or she serves.

briefs navy navy navy navy

• NEW SHIP-MANNING CONCEPT TO BE TESTED

Tests of a new method of manning active Navy ships are scheduled to begin 1 Jul 1975 and continue for the next two years. Under the concept, known as "80/20," five active destroyer-type ships will be manned by active duty Navymen to 80 per cent of their normal wartime complement. During mobilization, and for specific training periods, the remaining 20 per cent will be made up of selected inactive duty Reservists. The Reservists will come from five Ship Reinforcement Units (SRUs). Two will be located in the general vicinity of their ship's home port; three will be located inland to test the feasibility of locating SRUs in cities remote from major Navy ports.

When SRU personnel are not on board, the ships will be operated in basic training exercises by the 80 per cent active duty crew, with limited underway time. The "80/20" ships will not routinely deploy overseas.

Two of the ships involved in the tests will be homeported in San Diego and three will be located in major Navy port cities on the East Coast. The names of participating ships and Reserve units and the location of East Coast home ports have not yet been announced. The "80/20" concept is expected to create an annual savings of about one million dollars per ship due to reduced active duty salaries, lower messing and berthing costs and samller crews. It is being tested in conjunction with the Navy's total force policy which includes increased reliance on Reserve units.

• NAVY DISCONTINUES TWO-YEAR RESERVE AND THREE-YEAR REGULAR ENLISTMENTS

The Navy's "2X6" Reserve and three-year regular enlistment programs will end on 1 Jul 1975. This action is based on improved recruiting of four-year and longer-term enlistees and a servicewide policy to reduce dependency on short-term enlistments. The 2X6 program permits Reserve enlistees to serve two years of active duty, followed by three years in drill pay status and the final year as a standby Reservist. Navy people currently enlisted under this program will not be affected by the change. It was also announced that a new 3X6 Reserve program will be instituted on 1 Jul 1975. Under this program, Reserve enlistees will serve three years on active duty, two years in a drill pay status and the final year as a standby Reservist. This program will be in addition to the existing Air Training and Administration of Reserves (TAR) "3X6" Program.

• NAVY'S NEWEST AIRCRAFT MAKES FIRST DEPLOYMENT

The Navy's newest aircraft, the S-3A "Viking," recently began its first operational employment aboard a carrier. The historic mission was made by members of Air Anti-Submarine Squadron 21 on board USS John F. Kennedy (CV 67).

The twin-engine Viking is the first completely computerized, carrier-based, jet antisubmarine aircraft and replaces the older propeller-driven S-2 Tracker, first flown in 1952.

Viking contains an advanced avionics system designed specifically to keep pace with the increased capabilities of nuclear-powered submarines. Its general purpose digital computer is capable of analyzing and displaying underwater sounds and other data on television-like screens for interpretation. The plane's overall system is capable of rapid and reliable secure communication with other AWS units through data link. The S-3A is designed to carry an array of ordnance, including homing torpedoes, mines, depth charges, rockets and missiles, plus twice the sonobuoy load of the old S-2.

Viking has an all-weather capability and was specifically designed to perform at both high and low altitudes, providing long endurance and a maximum effective cruise speed.

● BRONZE HAMMER AWARD PRESENTED TO SIX INSTALLATIONS

The winners of the third Bronze Hammer Award competition were recently announced. In making the awards, Admiral James L. Holloway III, CNO, said, "resourcefulness and ingenuity" were the words most often used in describing the accomplishments of the installations who won.

The Bronze Hammer Award is presented each year to those Navy activities who, by using available resources, imagination and ingenuity, make the most outstanding contributions to improving the quality of Navy life through their own "Self-Help" efforts.

Individual activity awards were made in four categories:

- Activities with an enlisted allowance greater than 1000 with a Construction Battalion Unit (CBU) in the immediate area. Winner: NAS Alameda, Calif.
- Activities with an enlisted allowance less than 1000 with a CBU in the immediate area. Winner: Naval Receiver Facility, Northwest, Chesapeake, Va.
- Activities with an enlisted allowance greater than 1000 with no CBU in the immediate area. Winner: NAS Chase Field, Tex.
- Activities with an enlisted allowance less than 1000 with no CBU in the immediate area. Winner: NAS Fallon, Nev.

A special award category has been established for any Navy organization, tenant activity, community group, fleet unit, etc., which does not have primary responsibility for real property management of personnel support facilities, but which made significant contribution to the Navy's Self-Help Program and were deserving of recognition. Awards in this category were made to: The Department of Naval Science, California Maritime Academy, Vallejo, Calif., and the Commissary Store Complex, San Diego, Calif.

● PROMPT SUBMISSION OF FITNESS REPORTS REQUESTED BY VCNO

The Vice Chief of Naval Operations has recently requested that commands ensure the timely submission of officer fitness reports. Due to late submissions in the past, selection boards and BuPers distribution officers have been deprived of current officer evaluations necessary to ensure equitable consideration of individual officers.

In an unusual move, he has directed that the Chief of Naval Personnel monitor the timeliness of fitness report submission and advise him of those seniors who are delinquent.

● ET VOLUNTEERS SOUGHT FOR SURFACE SHIP NUCLEAR PROPULSION PROGRAM

Length-of-service eligibility requirements have recently been broadened to permit a limited number of outstanding Fleet-experienced electronics technicians to enter the surface ship Naval Nuclear Propulsion Program. Projected expansion of the surface nuclear fleet has increased the need for reactor operator petty officers (ET) with between four and eight years of service experience, proven performance as technicians and demonstrated leadership ability. Applicants who are accepted for this program will attend nuclear power training for a year and subsequently serve as reactor operators on nuclear carriers, cruisers and DLGNs (to be designated CGNs). Complete details can be found in BuPers Notice 1510 of 12 Feb 1975.

- OPERATION DEEP FREEZE NEEDS VOLUNTEERS

There is an urgent need for Navy people in pay grades E-4 thru E-7 from the UT, CM and CE ratings to volunteer for Operation Deep Freeze's wintering-over party 1975-1976. Also being sought are petty officers E-4 thru E-6 in the HT rating and petty officers E-5 and E-6 in the BT and EN ratings with auxiliary boiler experience. Additional information on special benefits connected with Operation Deep Freeze duty and application procedures are contained in BuPers Notice 1300 of 4 Oct 1974.

- SECNAV TOP MESSES AND CLUB AWARD WINNERS CHOSEN

Winners of SecNav's 1974 Messes and Club Awards Program were recently announced. They are: Commissioned Officers' Mess, Open, NavSta Charleston, S. C.; Commissioned Officers' Mess, Closed, NAS Corpus Christi, Tex.; Commissioned Officers' Mess, Closed (with social functions), NavPhiBase, Coronado, Calif.; Chief Petty Officers' Mess, Open, NavPhiBase, Little Creek, Va.; Petty Officers' Mess, Open, NavSta San Diego, Calif.; Enlisted Men's Club, NavSta Rota, Spain. The annual competition is held to promote excellence in Navy messes and clubs through recognition of those individual activities which have demonstrated outstanding service to their patrons, sound fiscal controls and effective management. The program is cosponsored by the Club Managers Association of America. Awards were presented to the winning mess and club managers at the CMAA convention in Vancouver, B. C.

- BICENTENNIAL COORDINATION OFFICE SEEKS IDEAS, OFFERS GUIDANCE

Because of strict budgetary limitations, the Navy's participation in the nation's Bicentennial must rely heavily on the sharing of efforts. To accomplish this, and to coordinate the Navy's role at the local and national levels, SecNav established the Bicentennial Coordination Office (BCO) last year (see ALL HANDS, January 1975, page 42). The BCO is still seeking creative suggestions, and is standing by to assist you in planning your celebrations.

To help in the sharing of ideas and to invite news of Bicentennial planning at the local and fleet level, the BCO publishes a monthly Bicentennial Newsletter. Because of budget restrictions, this Newsletter has limited distribution which includes news disseminating activities, District Commandants and their Public Affairs Officers and the Fleet Commanders. BCO hopes that through this Newsletter, news will reach field and fleet of Navy, other services, civilian organizations, federal, state, local and foreign governments' Bicentennial activities. BCO stands ready to coordinate, share information and ideas, and to solicit news of what YOU are doing for the Bicentennial. Write: Bicentennial Coordination Office, Office of the Under Secretary of the Navy, Department of the Navy, Washington, D. C. 20350, or telephone 694-1776 or 694-1976.

from the desk of the

Master Chief Petty Officer of the Navy

'Effective Feedback'

I have indicated on several occasions that the MCPOC/MCPOF/MCPON "chain of communications" really works. This fact was effectively demonstrated during the recent Master Chief Petty Officer of the Fleet/Force Conference here in Washington.

Five of the Master Chief Petty Officers of the Fleet/Force, representing all segments of the enlisted community, convened at the Bureau of Naval Personnel on 23 and 24 January for meetings with top-level naval authorities.

These five senior Navy enlisted personnel traveled to Washington with their respective fleet or force commanders, since a Fleet Commander-in-Chief Conference with the Chief of Naval Operations was scheduled during the same time frame. The Master Chief Petty Officers of the Fleet/Force present included: Master Chief Gerry Gray, U. S. Atlantic Fleet; Master Chief George Ingram, U. S. Pacific Fleet; Master Chief Sedgwick West, U. S. Naval Forces, Europe; Master Chief Duane Harris, Naval Education and Training Command; and Master Chief Richard Johnson, U. S. Naval Reserve.

Before their trip to Washington, these master chiefs had an opportunity to meet or consult with other master chief petty officers of the force and master chief petty officers of the command within their chain of communications. In this way, each master chief came to the conference well armed with information, questions, and problem areas from his respective fleet or commands.

The master chiefs were faced with a very demanding schedule during their two-day conference, which included meetings with 16 authorities who supplied expertise in a wide range of topics of direct concern to enlisted personnel and their dependents.

Among the speakers were VADM Emmett H. Tidd, Commander, Navy Recruiting Command; RADM Charles H. Griffith, Assistant Chief of Naval Personnel for Enlisted Personnel Development and Distribution; RADM Charles F. Rauch, Assistant Chief of Naval Personnel for Human Goals; RADM A. J. Whittle, Head, General Planning and Programming Division (Budget); and RADM J. G. Schoggen, SC, Commanding Officer, Navy Resale System.

The master chiefs were also given the most up-to-date information available on CHAMPUS, performance, evaluations, advancements, recent and pending legislation which affects Navy personnel, uniform matters, grooming standards, NEOCS, BEQ management, retention/career counseling, special services, and ships' habitability. Additionally, the master chiefs were able to meet and talk with Mr.. Bob Nolan, National Executive Secretary of the Fleet Reserve, and Mr. Jim Clark, editor of the *Naval Affairs* magazine.

After each presentation, the master chiefs were given an opportunity to ask questions of the experts. Additionally, time was allotted to permit the experts to receive input from the master chiefs on items which might be valuable for future consideration.

In my estimation, each of the sessions was very informative and supplied the master chiefs with valuable information to take back to their Navy communities. The "give-and-take" atmosphere of these work sessions proved very exciting and was an excellent forum for liaison between the decision-makers at the Bureau level and our enlisted members in the fleet. As a result, I am convinced that our chain of communications has been further strengthened and enhanced.

At the conclusion of the conference, the five master chiefs reported to both the Chief of Naval Opera-

ALL-WEATHER NAVIGATION SATELLITES

Navy's all-weather navigation satellite system will celebrate its 11th birthday next July.

The system, composed of six satellites in polar orbits, numerous ground tracking stations and shipboard receivers, enables Navy ships and over 300 commercial, civilian and research vessels to pinpoint their positions within a city block anywhere on earth. Users can obtain accurate position information any time of the day or night and during any weather condition.

The system, initiated in 1958, originally was designed and developed for the Navy under a contract with the Johns Hopkins Applied Physics Laboratory. This system was released by the government for commercial and public use in 1967.

According to the Navy's Astronautics Group at Point Mugu, which has operational and managerial control of the system, the number of military and civilian users of the system has steadily grown since inception. Last August, for example, it had more than 500 users—up from 270 last year. The number of military users increased to 375. Also, more foreign ships are using the system. Among these are vessels from England, Canada, Belgium, Japan, Sweden, France and the Soviet Union.

The system represents the only operational use of satellites for navigation in the history of space development. Its satellites, tracking stations and ship receivers have been used to assist Navy ships in arriving at the recovery of *Apollo* and Skylab astronauts. The system has also guided Navy ships in circumnavigating the earth.

The idea for the Navy's all-weather navigation Satellite System came about when scientists noticed a

Above: (Left to right) Master Chief Duane Harris, Naval Education and Training Command; Master Chief George Ingram, U. S. Pacific Fleet; Master Chief of the Navy John D. Whittet; ADM James L. Holloway III, Chief of Naval Operations; Master Chief Sedgwick West, U. S. Naval Forces, Europe; Master Chief Gerry Gray, U. S. Atlantic Fleet; Master Chief R. Johnson, U. S. Naval Reserve.

tions, ADM James L. Holloway III, and the Chief of Naval Personnel, VADM David H. Bagley. After ADM Holloway and VADM Bagley expressed their views to the master chiefs on several subjects pertaining to enlisted personnel, the master chief petty officers of the fleet/force made several recommendations to the CNO and CNP concerning current Navy programs and policies.

This conference reaffirmed my belief that feedback from the fleet is invaluable to everyone working at the Bureau level. By utilizing information obtained from our Navy men and women, programs which might have otherwise adversely affected enlisted personnel have been favorably modified or, when modification has not been the appropriate solution, steps have been taken to provide a better and more meaningful explanation of policy decisions.

I fully realize that many Navy members may not have the time or the opportunity to provide feedback directly to me. However, a viable alternative for all enlisted personnel is possible through communication with their respective Master Chief Petty Officers of the Command (MCPOC).

Input provided to the Bureau of Naval Personnel from the master chief petty officers of the command via their master chief petty officers of the fleet/force has allowed naval leaders and other cognizant authorities to maintain an acute awareness of the concerns, frustrations, and aspirations of those Navy personnel who work on a day-to-day basis to keep the Navy operating at maximum efficiency and readiness.

Additionally, the up-to-date information provided to the master chiefs at the January conference will go a long way toward improving the necessary communications links we have throughout the fleet. The master chiefs, using their newly acquired knowledge, are now better prepared to serve their commands. In this way, each Navy member can benefit from the conference and receive answers or alternatives to his personal needs, questions, and career objectives.

That's why the system really works!!

change in the frequency of radio waves emitted by an orbiting satellite. By measuring the shift, scientists determined the satellite's orbit.

The current satellites, each with a life expectancy of at least 13 years, orbit at an altitude of about 600 miles and broadcast their positions, as well as a continuous signal from which the radio frequency shift measurement is made. The position of each satellite throughout the orbit is computed in advance by a ground tracking station. This data is then transmitted to the satellite every 12 hours for continuous rebroadcast. Aboard ship, the continuous broadcast is picked up by the receiving unit and fed into the computer. The computer read-out gives the ship's position in longitude and latitude at the same time. Other equipment developed for use with the system includes a "backpack set" used in pairs for determining relative positions in any kind of terrain or over water. Another development is the "Geoceiver" for surveying. This has been used to fix the position of the magnetic South Pole and measure the drift of polar ice.

The most recent development in improving the system occurred in 1972 with the launching of an experimental Disturbance Compensation unit (DISCOS). DISCOS permits a spacecraft to counter external forces of solar radiation pressure and atmospheric drag on the orbiting satellite by means of thrusters. This made it possible to predict the satellite orbit for 12 days. The DISCOS unit is seen as the promise of satellites with such predictable orbits that charts and almanacs of their positions could be printed. According to its proponents, this might even finally eliminate the need for shipboard computers for satellite receiving units and thereby reduce satellite navigation equipment costs by one-half.

—LTJG Chris Taylor

What would you like to know about

COLA/HA?

Among the major concerns of anyone headed overseas during inflationary times is economics. Will the U. S. dollar stretch far enough to cover expenses?

One means the Department of Defense has of assuring it will, is by granting additional monetary allowances, as necessary, to balance an individual's or family's income against the cost of overseas living expense when that cost is greater than would be experienced stateside.

There are two types of station allowances: Cost of Living Allowance (COLA) and Housing Allowance (HA).

What an allowance can mean to you in terms of dollars and cents can be best understood, perhaps, by becoming familiar with how an allowance is established.

A Department of Defense activity called the Per Diem, Travel and Transportation Allowance Committee is responsible for determining whether or not an overseas cost of living or housing allowance is authorized and how much. The committee gathers data on the cost of living in the U. S. and overseas locations from a variety of sources. In the United States, for instance, the Bureau of Labor Statistics publishes data on the level of prices for goods and services, the military services provide price lists of commissary store prices and exchange services provide price lists in their facilities. Combining these, the committee uses a "market basket" method in which some 700 prices covering 160 different goods and services are used as a basis of comparison with overseas areas.

Data from overseas areas on the costs of similar goods and services in both military and commercial outlets is provided by senior commanders, an extremely important input, in that it is used to determine the need for station allowances at overseas locations.

Once the committee has determined the average cost-of-living prices for both stateside and the overseas area, it compares these prices to determine the ratio between them. This ratio, stated as a percentage of stateside prices, is rounded to the nearest two per cent (for example, 101.51 is rounded up to 102; 104.9 is rounded down to 104) and related to precomputed cost-of-living tables contained in the Joint Travel Regulations for each pay grade. Separate allowances are provided for unaccompanied personnel and accompanied personnel with small allowance differences from one to five or more dependents. These precomputed tables show percentages of the amount of pay available for living in the United States after allowances for quarters have been excluded and after average taxes, gifts, contributions, life insurance, and savings have been deducted. The table for COLA Index 110 then would recognize and pay a member 10 percent of what it would have cost him to live in the U. S. in recognition of higher costs at an overseas station where comparison with the U. S. showed a rate of 110.

Tables are currently provided for all steps from 102 to 198. Additional tables will be prescribed, if ever found necessary.

In line with this comparison, estimates are made of the relative importance of the various sources of supply. Using clothing as just one example, what per cent is bought locally at government outlets? What per cent is bought locally at commercial outlets? What per cent is ordered from the States? Incidentally, members of the uniformed services in the United States purchase 75 per cent of their food from military sources and 25 per cent from commercial sources.

Another factor that enters into the index is the relative importance of expenditures for such family budget items as food, clothing, recreation, medical care, transportation and so forth. At the overseas location, for instance, there may be no government medical facilities available. On the other hand, free recreational facilities may be present in large measure.

The differences in volume of purchases brought about by the climatic, economic, cultural and other aspects peculiar to a particular overseas location are also considered. Individuals living in Alaska or Newfoundland, for example, would spend—on the whole—far more on clothing, on a year-round basis, than those in tropic climates. For another example, automobile owners living in a relatively underdeveloped area would find the wear and tear on their cars and tires much greater than if they were in a location with well paved roads.

That is about the extent of what goes into the development of COLA. A housing allowance is intended to compensate you for the greater costs of rent, utilities and "moving-in" costs." The housing costs at the overseas locations are compared with the average basic allowances for quarters (ranging from $110.70 for a 3rd class petty officer to $303.90 for an admiral, monthly) received by members in the overseas area. A little figuring shows that this often allows for a favorable HA, because the monthly overseas housing expenses are, in most cases, greater than the BAQ.

"Moving-in" or initial occupancy costs are factors figured into HA. Such costs are those brought about in bringing a residence up to American standards. Improvements in the plumbing, electrical system and gas and heating installations, and painting, papering, plastering, screening and shelving are included.

The initial costs are divided by the number of months of the average overseas tour at the location. This amount is combined with the average monthly rental costs and utilities costs by pay grade to obtain an average overall monthly housing cost. When the average BAQ for each pay grade is subtracted from the overall housing costs, the difference is the housing allowance. It is not a monthly figure, but instead it is divided by 30 and expressed as a per diem.

There are two important elements that affect both COLA and HA. First, fluctuations in the rate of exchange of the dollar and the local country currency can result in either increases or decreases in the prescribed allowances. For example, if the exchange rate of the dollar improves relative to that of the foreign currency, then the cost of local housing, goods and services decreases in terms of the purchasing power of the dollar. Secondly, the inflation rate in the United States has been increasing steadily over the past few years and in many instances the rate of inflation in the States has been in excess of the rate of inflation experienced in certain overseas areas.

The net effect of this is that the stateside base which is used as a comparison against the overseas costs is rising faster than overseas inflated costs.

For instance, if overseas prices increase by five per cent during a given period and the stateside base increases 10 per cent during the same period, then a cut in the COLA is warranted—and required by law—in order that the relative stateside and overseas ratio is maintained. This point is perhaps the most difficult to understand and accept. However, one consolation is that, if the overseas inflation is greater than that of the United States and if a COLA is otherwise justified, then the COLA would be increased by an appropriate amount.

Here's the background on station allowances as discussed—station allowances are carefully computed amounts paid to personnel assigned overseas to equalize differences between all elements of stateside living and overseas living. Station allowances are not paid to compensate for duty at a remote location, or a location with few off-station facilities, or a station subject to unpleasant weather most of the year. Nor are they paid for people representing the United States in a foreign area.

Allowances for each location are reviewed annually and are subject to change at any time. They are established by the Per Diem Travel and Transportation Committee, created 25 years ago to carry out certain provisions of the Career Compensation Act of 1949.

Operating as an independent agency under the broad policy control of the Secretary of Defense, its members are of the level of Under Secretary or Assistant Secretary of the Army, Navy and Air Force. Equivalent officials of the Department of Transportation (for the Coast Guard), Commerce (for the National Oceanic and Atmospheric Administration (NOAA) and Health, Education and Welfare (for the Public Health Service) take collateral action on all committee determinations. *Joint Travel Regulations* is the committee's publication.

Most of the day-to-day work is carried out by an advisory panel comprised of an officer of each of the uniformed services and a civilian staff. Both the group and staff are headed by an executive officer. This chief position is rotated among the Army, Navy and Air Force.

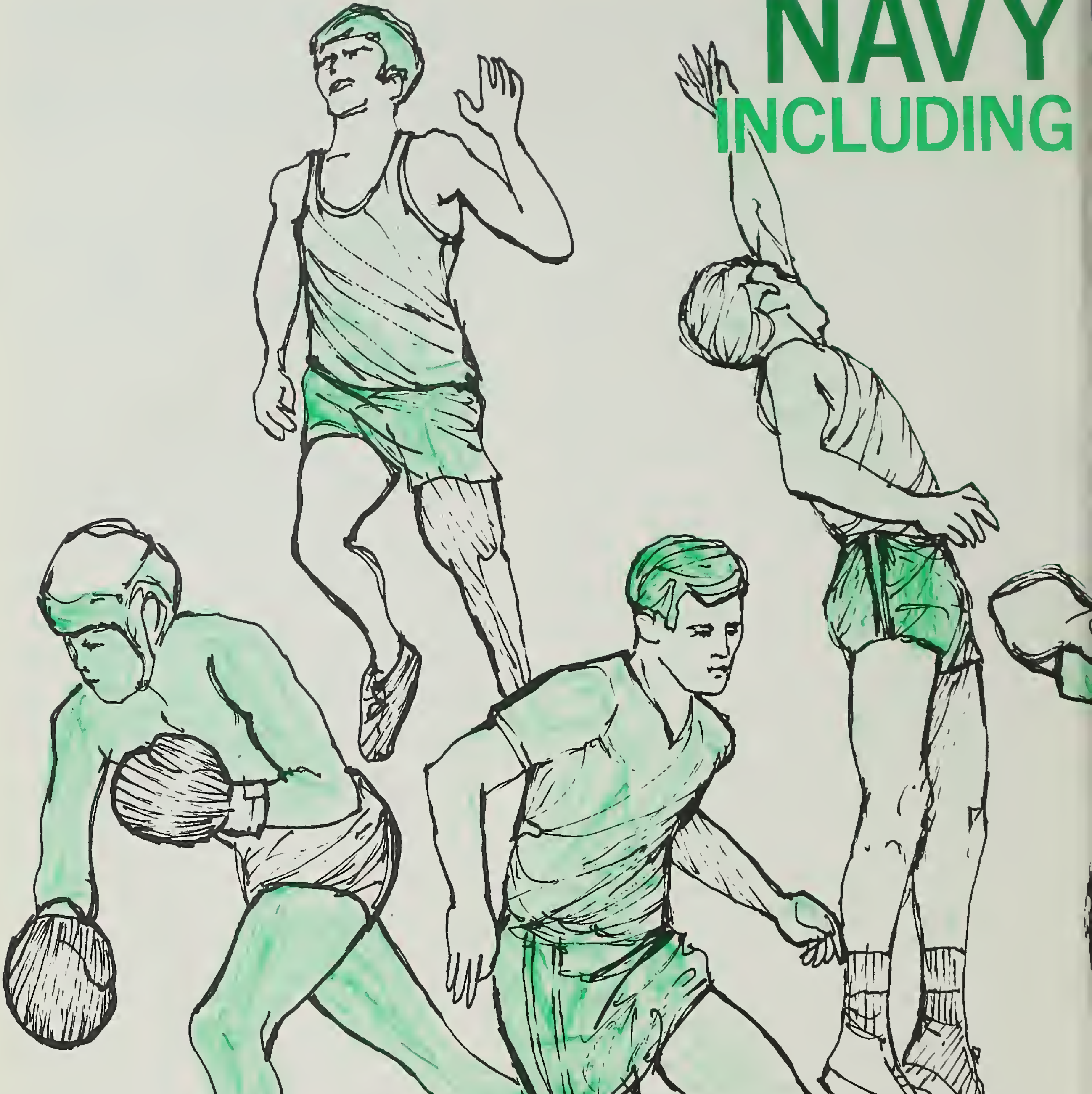
A good part of the staff's work deals with reducing to tables a mass of rough statistical material in the form of annual reports from more than 80 countries. The committee members not only deal with reports coming in, but also, they or their representatives go out and get a firsthand look at overseas locations, and make any changes accordingly.

Following is a representative listing of daily per diem, housing and cost of living allowances for Yokosuka, Japan, as taken from Appendixes B and C of *Joint Travel Regulations*:

Cost of Living Index..104
Travel Per Diem Allowance $34.00

	Housing Allowance		**Cost of Living Allowance**	
Grade	**W/O Dependents**	**With Dependents**	**W/O Dependents**	**With 3 Dependents (average family)**
O-10 thru 0-8	$2.65	$3.35	$.80	$1.05
0-7	2.65	3.35	.75	1.05
0-6	2.45	3.00	.75	1.00
0-5	2.30	2.80	.75	1.00
0-4	2.10	2.45	.70	1.00
0-3	1.85	2.25	.70	.95
0-2	1.60	2.05	.65	.85
0-1	1.25	1.65	.60	.75
W-4	2.00	2.40	.70	1.00
W-3	1.80	2.20	.70	.95
W-2	1.60	2.00	.65	.85
W-1	1.45	1.85	.60	.80
E-9	1.55	2.15	.70	.95
E-8	1.45	2.00	.65	.90
E-7	1.25	1.85	.65	.85
E-6	1.15	1.75	.60	.80
E-5	1.10	1.60	.55	.70
E-4	.95	1.40	.50	.65
E-3	.85	1.25	.45	.65
E-2	.75	1.25	.45	.60
E-1	.70	1.25	.45	.60

NAVY
INCLUDING



SPORTS ROUNDUP

A PREVIEW OF ALL-NAVY SPORTS

What do a french horn-playing golfer, a hocky goalie and a Boston Marathon runner have in common? They are all Navymen, for one thing, and they're all proof that the Navy sports scene produces many outstanding personalities every year.

At NAS Miramar, Hospitalman Apprentice John Kuklinski has his eye on the goalie slot with the 1976 Olympic Hockey Team. Kuklinski, a hockey nut since childhood, became actively involved in the sport when he joined the Junior Hockey Team in his hometown of Phoenix, Ariz., while he was in high school.

Kuklinski's second interest has always been medicine, and he wanted to get into physical therapy with the big hockey teams after high school. His eagerness and abilities got him a job as Assistant Trainer (physical therapist) with the Western Hockey League's Phoenix Roadrunners. His duties included the prevention and treatment of injuries, helping to maintain the team's equipment and sharpening players skates. He also learned about the rigidness of a professional athlete's life, where it isn't unusual to practice seven hours a day to build stamina and polish techniques.

Kuklinski held the Roadrunner job for two and one-half seasons before joining the Navy. In the final half-season he was also the team's third goalie as well as Assistant Trainer. He also played one season in Chicago as goalie in the Senior Hockey League, and was offered a job as trainer for the Houston Aeros of the World Hockey Association. Being in the Navy, he had to refuse.

Currently, Kuklinski is goalie for the Senior Hockey League team in Mira Mesa, Calif. In what little spare time he has between his Navy duties at the Miramar dispensary, and the team's activities he practices for the Olympic tryouts.

"It really gives me a great personal satisfaction being goalie," he said. "When those would-be goals are stopped, it's totally me, and I know I did it without any help from anybody else."

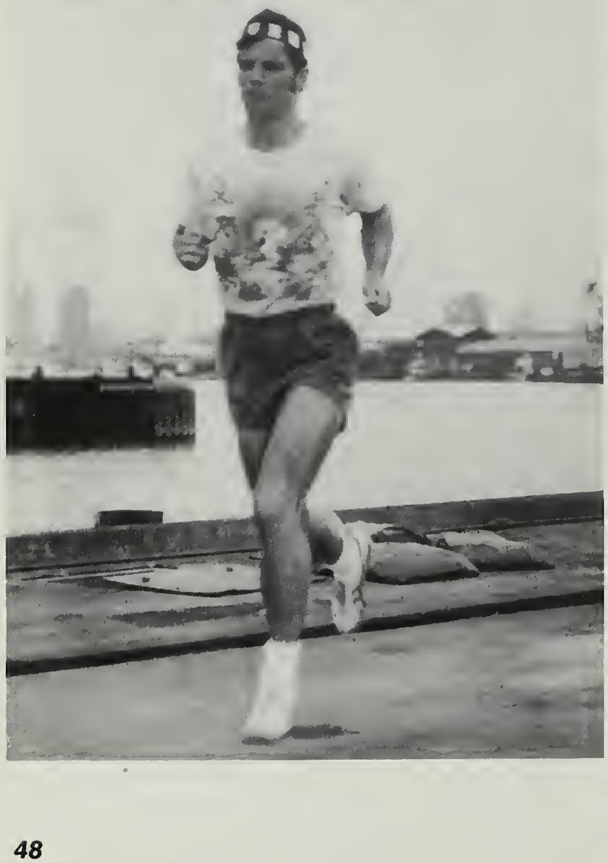
Kuklinski hopes to get a degree in physical therapy, and some day play goalie with a National Hockey League team. "Hockey is a part of my whole life," he said. "I kind of live for it, I guess."

That french horn-playing golfer displayed his sports talent by achieving the dream of every golfer, a hole-in-one. But once wasn't enough for Chief Musician Doug Bailard, a member of the U. S. Navy Band; he did it twice in one month.

The first came during a practice round, while getting ready for the Naval District Washington tournament last year, when he plunked in a five-iron shot on the 176-yard fourth hole at the Laurel Pine Country Club. Three weeks later, during the NDW Tournament, he lofted a seven-iron shot onto the 14th green and into the cup for his second hole-in-one. At the time, Bailard was a member of the U. S. Navy Band golf team that finished fourth among 16 teams in the tournament.

In Boston, Seaman Mark Gibson, of USS *Lexington* (CVT 16), was among the 2000 entries to run in the grueling 27-mile, 385-yard-long, 78th Boston Marathon. Among those he competed against were former Olympians, contestants from more than 18 foreign countries and many other runners from the U. S. armed forces, including a 21-man delegation from West Point. From that massive and talented field, Gibson finished 53rd with a time of 2:27:58 (the winning time was 2:13:39), an impressive run for any Marathon runner and certainly one to be proud of; he finished first among the armed forces entries.

About 11 miles out, Gibson got severe cramps. "I felt like quitting the race at that point, but the crowd won't let you," he said. "All along the course thousands of people line the streets urging and cheering you



on. You feel that if you quit, you'll let the crowd down more than you will yourself.

"I'll be back," Gibson said. "Now I know the course and realize the mistakes I made . . . I'll be back." Spoken like a true Navyman.

The Navy sports scene over the past year took on an international flavor too. In all parts of the world, ship and station teams were invited to friendly competition by their hosts.

In Egypt, members of Helicopter Combat Support Squadron Six, Detachment Nine, took on a team of soldiers from Ghana in a basketball game. Detachment Nine is part of Operation Nimbus Star, clearing mines from the Suez Canal; the Ghanaians are part of the UN Emergency Force observing the Middle East truce on the Sinai Peninsula.

The Americans won the game, but that was incidental. The importance of this game, and all the Navy's international sports events, is the friendship it created. It also gave the players on both sides a morning away from their sometimes monotonous duty. The Ghanaians explained that basketball was a relatively new sport to their country, and they had learned several new tactics during the game. They felt they could incorporate some of these tactics in the future development of the sport in Ghana. The promise of a return match was made before the teams returned to their jobs.

Around on the other side of the world, in California, other teams were adding to the internationalism of Navy sports.

In San Diego, the U. S. and British Royal navies met once more in the ongoing Read Cup sailing championship. The Read Cup, or British-American Naval Trophy, has been presented annually since 1954 to encourage team sailing between the two navies. Competition may be held whenever they meet.

This San Diego regatta was between three U. S. teams from local commands and three British teams from HMS *Kent*. The winning skipper overall was

Far left top: Two holes-in-one for MUC Doug Bailard within four weeks; photo by MU1 V. Cuthie. Far left bottom: SN Mark Gibson finished 53rd among 2000 entries in the 78th Boston Marathon. Left: Tipoff in the basketball game between members of Helicopter Combat Support Squadron Six, Detachment Nine and soldiers from Ghana; photo by LT Greg Wilson. Below: The pace was fast and furious in the soccer match between USS Oriskany and HMAS Perth.

AFCM Tom Freed of NAS North Island. His crew were OS2 Fred Borcherding and USMC Captain Jim Sanders. The U. S. also won the regatta with a score of 87 to 70. This was the year's fourth match. The U. S. Navy had previously won at San Francisco and in San Diego; the Royal Navy had won at Subic Bay in the Republic of the Philippines.

Farther up the coast, in Long Beach, soccer teams from USS *Oriskany* (CVA 34) and the Australian destroyer HMAS *Perth* squared off for a series of seven soccer matches. Both ships were in the Long Beach Shipyard for overhaul. The outcome of the match is not known, but the first game was disastrous for the Americans. The Aussies scored five goals in the first 30 minutes of play, setting the trend for the game. Just before halftime, *Oriskany's* JO3 Keith Knutson managed to kick in the first goal for the Americans, which made the halftime score 5-1, *Perth*. The Australians scored six more points in the final period.

Although the *Oriskany* team showed determination and hustle, this was the first organized soccer match for most of her players. The opponent, on the other hand, was highly organized and practiced in its national sport—how about some baseball, *Perth*? In any case, the series worked out for both sides. The Australians got some practice; the Americans got some experience, and both teams had a good time of it.

Many champions have been produced from the ranks of Navy sports(wo)men over recent months.

A while back, Chief Machinist's Mate Al LaChance, a diver at the Naval Undersea Center in Long Beach, spotted an inexpensive bow at a garage sale. He decided that archery might be an interesting sport to take up, so he bought it and became, he said, "instantly serious" about archery.

In less than a month he took second place in the first tournament he entered. Getting into his new thing, LaChance had a 45-pound pull bow designed for him by the top bow maker in the country, and began practicing four hours a day. In less than a year after he took up the sport, LaChance entered the California State Archery Championship and took first place. In doing it, he set a new state scoring record with more than 2600 out of a possible 3000 points. Later, he went to the national competition and placed 36th. He is now preparing for the 1976 U. S. Olympic Team tryouts.

In another sort of shooting match, Construction Mechanic 1st Class Lenard King, an instructor at Construction Mechanic School, Port Hueneme, Calif., was crowned winner of the 28-gauge division at the Armed Forces Skeet Shooting Championships last year in San Diego. King, the first Navyman to capture this title, ran 100 straight "birds" to win the division. He also helped the all-Navy team win its title by placing as high man for the team with the 12-gauge. King was awarded the George Young Memorial Trophy for his 28-gauge win.

King has also competed recently for a spot on the 1976 U. S. Olympic Team. Out of a possible 300 he hit 279 birds, earning a spot in the top 20 of 250 competitors. He pointed out though, that he has had only one year of international shooting experience, as most of the competition the Navy team has been in was under American rules.

In boxing, one of the Navy's champions is Seaman Garry Raymond, the current all-Navy welterweight champion. Boxing is nothing new to Raymond. Before entering the Navy he had won the 1969 and 1970 Oklahoma Golden Gloves welterweight crown, the 1971 Texas Golden Gloves welterweight championship. Last year, while serving at the Little Creek Amphibious Base, he won the Virginia AAU welterweight crown.

In the national AAU Championship tournament held in Nashville, Tenn., he made it to the quarterfinals before being eliminated. Like the champions mentioned above, Raymond hopes to be a part of the 1976 U. S. Olympic Team.

"Boxing takes a lot of practice and work," he said, "because you have to be in top shape so you can give your all while you are in the ring." He practices what he preaches. Each day Raymond does six miles of roadwork and three hours of shadowboxing, rope skipping and heavy punching and speed bag work. After all that he spars several rounds. All for three 3-minute rounds.

And finally on our list of champions, a Navy fisherman won a prize in the Seattle Washington Seafair's $30,000 Salmon Fishing Derby. Storekeeper 1st Class George Breeding of the Navy Recruiting District Seattle had the dubious distinction of winning the "super consolation prize," a two-man, foot-powered paddle boat, for *not* catching a fish.

"Next year I hope to really give it hell," said Breeding. "If I'm lucky enough to win something for not catching a fish, just imagine what I might win if I catch something."

That's a little of what it has been like recently on the Navy sports scene—some winning, some losing, but all of them really giving it hell.

—JO1 Tom Jansing, USN

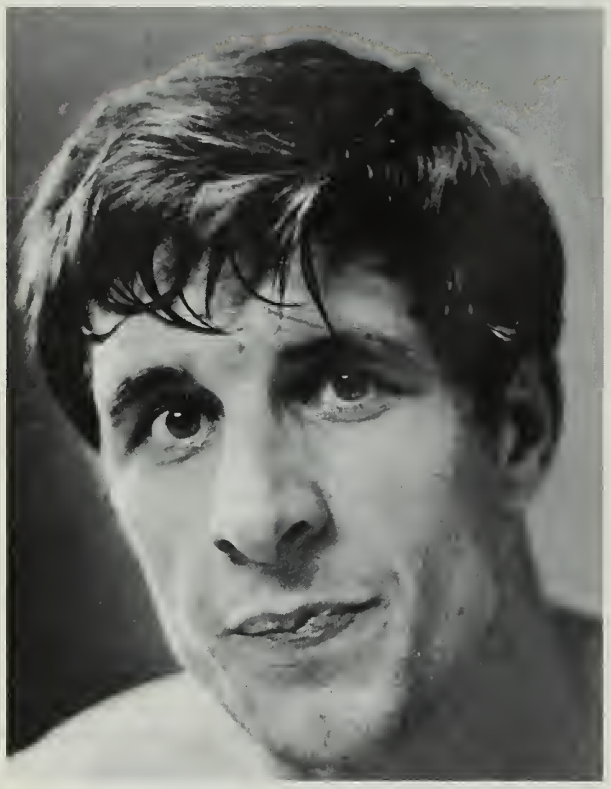
From left to right: All Navy Welterweight Champion SN Garry Raymond; photo by JO3 G. Smith. California State Archery Champion Chief Machinist's Mate Al LaChance. Storekeeper 1st Class George Breeding tries out the consolation prize, a two-man paddle boat he won for not catching any fish in the Seafair Salmon Derby, Seattle, Wash.; photo by PH1 J. A. Davidson.

ALL-NAVY INTERSERVICE EVENTS

The 1975 All-Navy and Interservice Sports Championships are underway. For the next six months Navy men and women who win at the command, district and regional levels will be competing for all-Navy awards in almost a dozen different sports. These winners will then go on to the Interservice Championships. Here is a rundown on the all-Navy and interservice events:

- *Volleyball.* All-Navy: 14-18 Apr, NAS Moffett Field, Calif. Interservice: 28 Apr-2 May, Fort Lewis, Wash. All-Navy competition will be under the U. S. Volleyball Association rules in a double round robin tournament.
- *Bowling.* All-Navy: 28 Apr-2 May, CBC Port Hueneme, Calif. Interservice: 5-9 May, Wright-Patterson AFB, Ohio. All-Navy competition will be for men and women and bowled under the ABC and WIBC rules. Team event: Each member of each team bowls 12 lines. Total pinfall for each team will determine the winner. Doubles event: Each doubles team bowls 6 lines. Total pinfall for each team will determine winner. Singles event: Total pinfall for six lines will determine winner. All events: Total pinfall for 24 lines will determine individual all-events champion.
- *Track and Field.* All-Navy: none. Interservice: 2-6 Jun, The Presidio, San Francisco, Calif. Navy participants to the interservice competition will be selected from nominations forwarded by commands to the Chief of Naval Personnel.
- *Tennis.* All-Navy: 21-25 Jul, PHIBASE, Little Creek, Va. Interservice: 28 Jul-1 Aug, USMA West Point, N. Y. All-Navy competition for men and women will be held under U. S. Lawn Tennis Association rules for singles and doubles. The tournament will be a single elimination type.
- *Sailing.* All-Navy: 28-31 Jul, NavSta Treasure Island, Calif. Interservice: none. Races will be sailed under IYRU rules as adopted by the NAYRU. Seventeen-foot O'Day Sailors with spinnakers, will be used, each manned by one skipper and two crewmembers. Competition will be a round robin type, sailed on an olympic course as modified by the local race committee.
- *Slowpitch softball.* All-Navy: 28 Jul-1 Aug, NavSta Charleston, S. C. Interservice: 11-15 Aug, NavSta Charleston, S. C. All-Navy games will be played under Amateur Softball Association rules in a round robin type tournament. Official restricted flight softballs will be used.
- *Fastpitch Softball.* All-Navy: 25-28 Aug, NAS Memphis, Tenn. Interservice: none. All-Navy games will be played under Amateur Softball Association rules in a double round robin type tournament.
- *Golf.* All-Navy: 8-12 Sep, NAS Pensacola, Fla. Interservice: 15-19 Sep, Camp Lejuene, N. C. All-Navy competition for men and women will be under U. S. Golf Association rules in a 72-hole medal type tournament.

A CHAMPION IN THE STRANGE ART OF KICKBOXING



"Success is where you find it," goes the old saying, and sometimes it's found in some mighty strange places. James V. Johnson found his success in the Orient as the heavyweight kickboxing champion of Japan. (He fights in his bare feet.)

The 26-year-old Navy diver is stationed at the Yokosuka Naval Base, 40 miles south of Tokyo, where he performs inspections of ships' hulls and underwater repairs of all kinds. In his free time, Johnson, known as "Jimmy John" in the ring, practices to keep in shape to defend his kickboxing title.

A combination of conventional or western boxing with several of the Oriental martial arts like judo and karate thrown in, almost anything goes in kickboxing. But speed and stamina are the two most important assets. When Jimmy John practices, he spars and shadowboxes like regular boxers and also sharpens his skills by using his elbows, knees and feet.

Jimmy John, a trim six-foot, three-inch 190-pounder, started his off-duty kickboxing career in 1970. Since then, he has fought 21 bouts with only five losses; seven of his wins were by knockouts.

It all started one evening while he was watching a kickboxing match on television at home and he remarked to his Japanese wife, Beniko, that the kickboxer he had seen would not stand a chance if one of the boxing champs trained in the more familiar version of the sport were to get into the ring with him. His wife disagreed and was quick to wager a fur coat against a new car that Jimmy John would not last three weeks as a kickboxer.

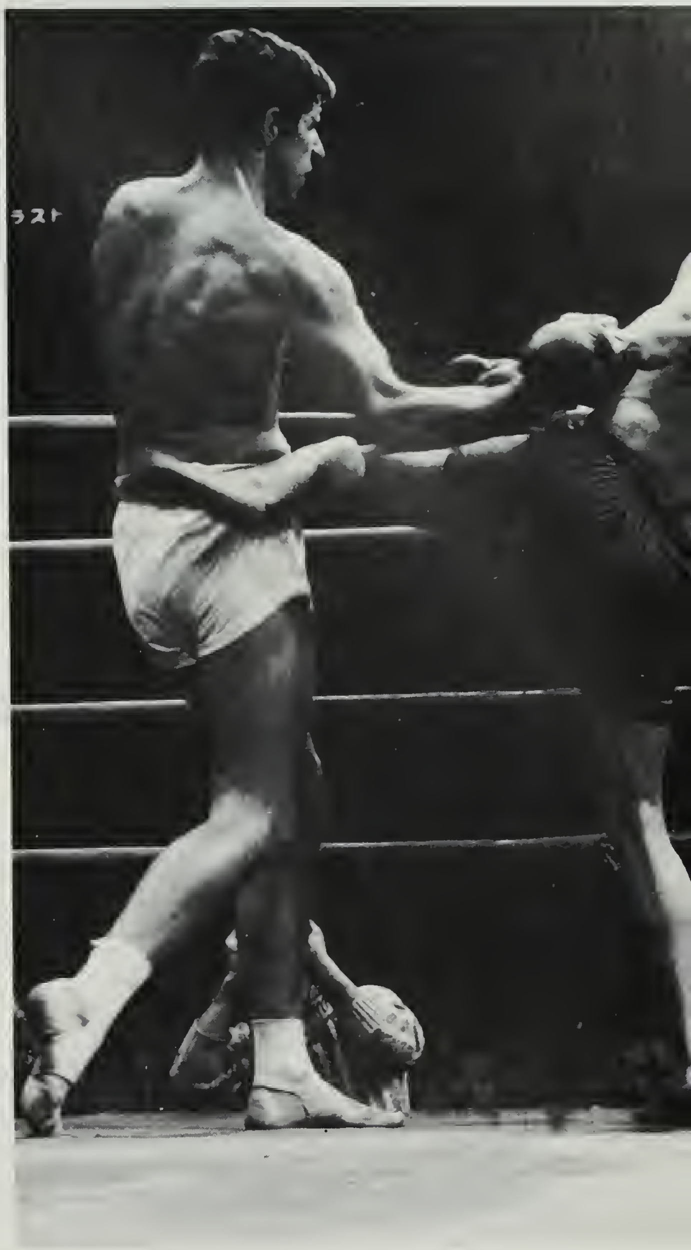
Later, the Johnsons were on holiday leave and Beniko took her husband to a local kickboxer training gym. She explained to the manager and trainers at the gym how her husband felt about kickboxing and he started training on the spot.

Jimmy John discovered that many Japanese welcomed American participation in kickboxing, but from past experience had little faith in their stamina to continue the program. They discovered that even the most highly motivated Americans usually completed less than three weeks of training before dropping out. Because of this, the trainers, who also doubted his sincerity, showed Jimmy John only the basic stance and sent him off to train on his own.

When Jimmy John started training he was a smoker and took an occasional drink. "After the first hour's workout, I was very tired and ready to start shopping for a fur coat," Jimmy John said. "But I didn't want to lose the bet, so I decided to give up both these habits instead."

Four weeks after he started working out, his trainers at the gym noticed his efforts and started teaching him more techniques. They helped him de-

Facing page top: James V. "Jimmy John" Johnson. Facing page bottom: On the job as a Navy diver in Yokosuka, Japan, repairing ships' hulls and other submerged equipment. Left: With the assistance of his trainer and manager, Jimmy John takes a break between rounds. Below: In the ring with a Thai boxer.



velop a suitable training program. Early in 1971, Jimmy John fought his first professional bout—and lost. During his first season, four of his five matches went to his opponents. Depressed, but not ready to throw in the towel, he continued working out in preparation for the next season. Hard work paid off and several months before the season's start he was considered to be the number one contender for Japan's heavyweight title.

Jimmy John met Japan's heavyweight champion, Yosenoba Igano, in the ring for the first time in October 1972. He TKO'd the champ in one minute and 17 seconds of the first round of a five-round title match.

Jimmy John enjoyed the glory of being the all-Japan heavyweight kickboxing champion—until he lost the title during a rematch with Igano in May 1973. Soon after that fight, Jimmy John decided he had enough of kickboxing and retired from the ring.

During the following months he was constantly encouraged by his trainers and members of the boxing commission to return to the ring, or at least help train another American boxer. He agreed to help as a trainer.

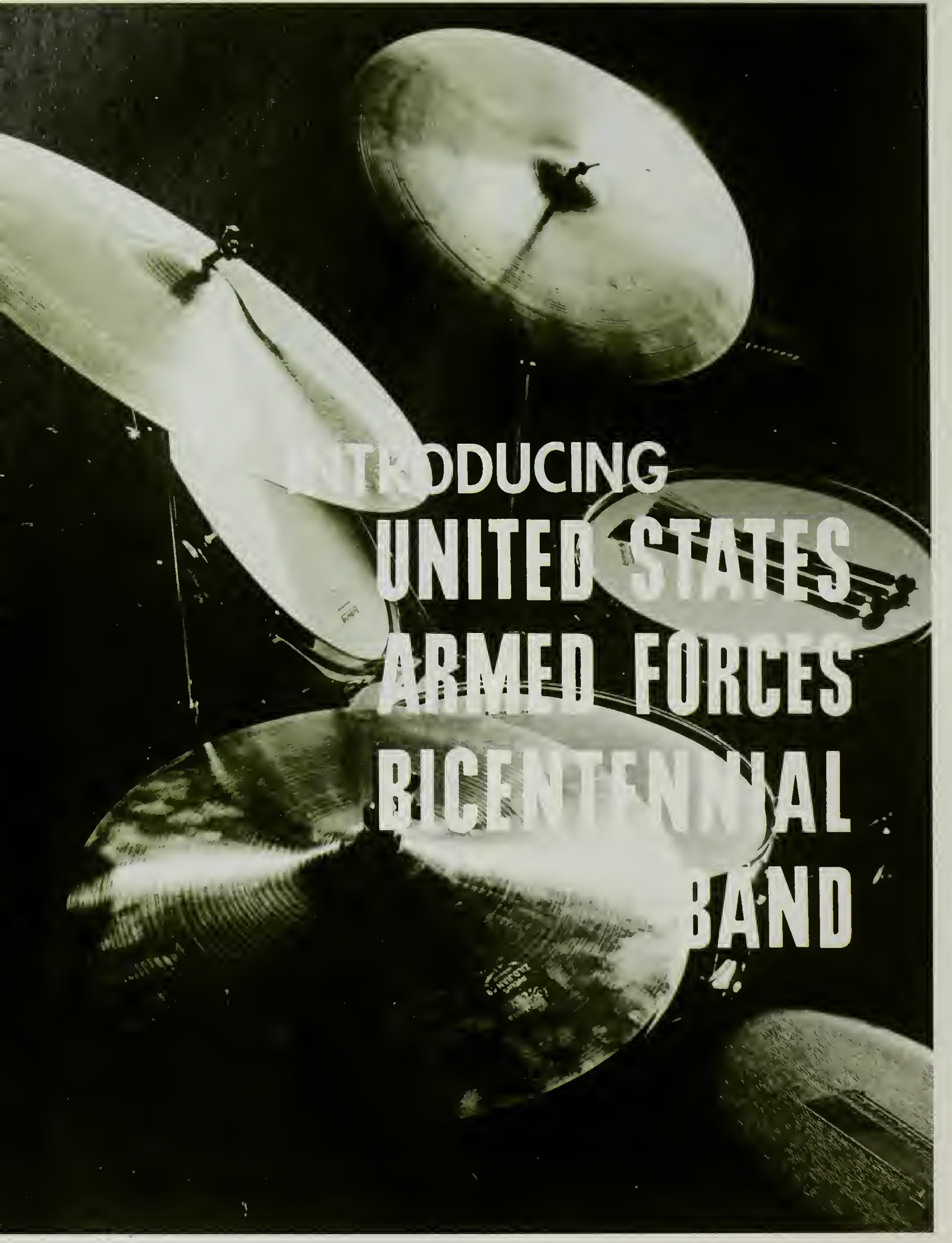
Jimmy John's protege entered the ring for his first fight in August 1973 with the American coaching ringside. "I couldn't take it anymore; watching that fight started my blood boiling. I knew then I had to get back in the ring myself," he said.

As September rolled around Jimmy John started working out in the Japanese gym at a stiffer pace than before. Two months later he met Igano in the ring again, this time in a non-title match. He knocked the champion down four times during the first round and Igano's trainers threw in the towel before the first round ended. The win led to a title bout.

Jimmy John met Igano for the title again on 5 Jan 1974 and went the full five rounds. By a decision Jimmy John regained his title as Japan's heavyweight kickboxing champion. "Now that I have the title again, I plan to continue training so I can keep the belt for as long as possible," he said.

For the record, Jimmy John won the bet with his wife and bought himself a new car. He bought Beniko not one but two fur coats and nearly a year later, Jimmy John is still fighting. He's still the champ.

—Photos by JO2 Dennis Fields



INTRODUCING UNITED STATES ARMED FORCES BICENTENNIAL BAND

Some Navy musicians have been given an assignment which could very well turn out to be one of the most interesting experiences of their lives. These 19 people will spend the next two years traveling from one end of the country to the other, as representatives of the Department of Defense, to entertain Americans and help them celebrate our nation's 200th anniversary.

These lucky musicians have been selected to be members of the United States Armed Forces Bicentennial Band (USAFBB).

This unusual, 67-piece symphonic band and the accompanying 24-voice mixed chorus is made up of men and women from each of the five armed services. It was created as the best means by which the Department of Defense and all the armed services of the United States could be represented at one time in local bicentennial celebrations across the land. As Army Lieutenant Colonel Hal J. Gibson, the band's commander and conductor, said, "The occasion of the United States Bicentennial observances called for a unique response from the military. The major service bands have always been held in the highest esteem by listeners the world over, both for their musical prowess and as goodwill ambassadors for America. The popularity of these renowned and much sought-after units of the military community prompted the creation of the United States Armed Forces Bicentennial Band."

The idea for the USAFBB started in the office of the Assistant Secretary of Defense for Public Affairs in August 1973. It was one of several suggestions as to how DoD could participate in the bicentennial. The Army was given the job of initial research to see if the band project was feasible and made several recommendations after months of study. By early 1974 plans for the multiservice band were firm.

"No more appropriate choice could have been made," said LTCOL Gibson. "As an integral part of the Armed Forces since our first battle for independence, a service band can readily identify historically with the birth of our nation."

Next, LTCOL Gibson, Navy Lieutenant (jg) Bill Brittain and Air Force Captain James C. Whittenton (both associate conductors of the band) were given the job of organizing the new band. The biggest problem faced was its uniqueness—never before had a combined band been put together for such a long-term operation. They had to find the answers to such questions as: where to locate the band, how to operate it, how to get personnel, the logistics, uniforms, supplies, instruments and finances.

One by one the task group found solutions to their problems and on 24 Apr 1974, after a review of their recommendations by all the services, their plan was approved. The band was in business. All that needed to be done was gather musicians, start rehearsals and go.

Gathering the best musicians available, the most important task, began with a request for volunteers from the established major service bands.

Chief Musician Patrick Puckett, trumpet and post horn soloist with the U. S. Navy Band, is one who signed up. "For me," he said, "it represented a once-in-a-lifetime chance. It's a first class organization, and I feel it's going to be one of the best bands in the country."

Also from the U. S. Navy Band is LTJG Brittain, who was conductor of their 19-piece dance and show orchestra, the "Commodores." "I wanted to be a part of this band because it's a piece of history, a big piece of history," he said. "We will be square in the middle of a celebration with 200-plus million people participating and this is a great opportunity."

The band's organizers knew they would have to look to other sources besides the major military bands for

recruits—after all, those bands have their own bicentennial commitments.

The next source they turned to was the services' line, field, Reserve and National Guard bands. Members of these were invited to audition at Fort Meade, Md., the USAFBB's home base about 25 miles north of Washington, D. C.

Musician 3rd Class Barbara Wade, an oboist, came to the USAFBB in this way from the CINCLANT Headquarters Band in Norfolk. "I was in Washington visiting a friend who is stationed at BuPers when I heard about this band," she said. "It sounded like a great chance, especially to travel, so I called LTJG Brittain to see if there was an opening for me. There was, and I auditioned successfully in July."

Barbara is a good example of the kind of talented people who came to the band. She holds a bachelor of music degree, with a major in music education, from the University of Cincinnati College Conservatory of Music. According to LTJG Brittain, all the band members have studied music or have a good professional background, some have MA's and even PhD's. All have many years' experience playing with school, military or professional bands.

The search for the finest musicians to fill some still vacant spots was next taken to the civilian community. LTCOL Gibson spent a month traveling to some of the country's best music schools to hold auditions. Those interested in joining the Navy were offered a special enlistment program which allowed them to enter for the two-year bicentennial period only. Furthermore, since time was running short, they were not required to attend boot camp. Instead, each is required to attend classes at Ft. Meade band headquarters to learn basic Navy regulations and traditions. They are also required to complete their professional and military requirements correspondence courses.

Bob Barnett, a chorus tenor, enlisted in the Navy

Facing page top: Army Sergeant 1st Class William D. May issues an oboe to Navy musician Barbara Wade. Facing page bottom: The band during rehearsal. Left: MUC Patrick H. Puckett. Below: Army Specialist Richard Clardy and wife, Navy Musician 1st Class Mary K. Clardy.

under this program following his graduation from the University of South Dakota. "I wasn't sure if I wanted to continue for my master's or not," he said. "When this offer came along and I auditioned successfully, I decided to join, mainly for the experience but also for travel. I'm happy to be a part of the American Bicentennial in this way."

In addition to musicians, support personnel were also needed. Since the band is to do a great deal of traveling it is essential that it be completely self-reliant. For this reason, administrative, supply, motor pool and public affairs staffs specifically for the band were assembled.

Once all the necessary people were gathered, total strength added up to 130 people: 67 instrumentalists, 24 chorus members and 39 support personnel. Nineteen musicians and six members of the support group are naval personnel.

An interesting aspect of the band is that among its 35 men and 56 women are six husband and wife teams. For these, the Bicentennial Band experience will be something special now, and to look back on in future years.

Mary Karen Clardy, a flutist, is the only Navy member among the band's married couples. Her husband, Army Specialist Dick Clardy, a trumpeter, came to the USAFBB from the Army Field Band. At that time Mary Karen was studying music at Catholic University in Washington, D. C., close to where Dick was stationed.

"When the opportunity to work with Dick first arose I was very excited about it," she said. "We discussed it thoroughly, but I think we had both made up our minds."

Mary Karen auditioned successfully for the band at Ft. Meade and enlisted in October. "I'm really excited about my assignment to the band," she said enthusiastically. "Now Dick and I can spend more time together, and we'll be seeing more of this great country than most Americans ever get to see. I also realize that it's a wonderful opportunity for a woman just out of college. I'll have a chance to gain invaluable experience and meet interesting people."

Another problem the band's organizers faced in the beginning was uniforms. After much deliberation it was decided that members would wear the uniform of their own service. Not only would this save money, it was reasoned, but would also effectively demonstrate the multiservice aspect. It would also allow individuals to display the pride each has in his or her own service branch. The only common uniform item worn will be a USAFBB breast badge.

How to get the band from one place to another was another big problem in the beginning. It was decided that most of the traveling will be in three buses. Following along will be at least three truckloads of instruments, sheet music, music stands, mikes, amplifiers and other equipment. Only on special trips or when the need arises, will they fly.

The band was beginning to shape up in the last weeks of 1974, but things were still hectic. Many band members had not reported to Ft. Meade, and those that had were trying to get organized, running around getting their uniforms (if they had just joined the service), being issued instruments and generally trying to get

Above: MU1 Brian Bowman, euphonium soloist. Center top: LTCOL Hal J. Gibson, band's commander and conductor. Center bottom: Female members of the mixed chorus. Far right: LTJG William G. Brittain, associate conductor.

used to their new duty. Each day a new member or two would report in and the disorganization seemed to be an endless process. To add to the confusion, the old barracks given for the band rehearsals and headquarters was being remodeled. To the sounds of individual trumpeters and drummers practicing were added the pounding of hammers amid the rasping of saws. Supplies were stacked wherever they could fit and tables, chairs, desks and lockers were disarranged to meet any need. Eventually, the old building will have large rehearsal halls, individual practice rooms, administration offices, storage spaces, new paint, sound-absorbing draperies and all the other necessities to make it a first class music center. In the meantime, plans were beginning to gel in spite of the apparent mass confusion.

Finally, on 13 Jan 1975 the first rehearsal with the full band and chorus was held. VIPs and news media representatives were invited to attend and they were the United States Armed Forces Bicentennial Band's first audience. In spite of the fact that this was the first time the band had ever played together, they put out a sound that would rival that of any in the country. After they've played together for a while that sound should be, in a word, super.

As LTJG Brittain said, "There's every indication that it should be the finest military band ever put together in the nation. Every member is handpicked. It's not often that opportunity comes along.

"It's an all-star team," he added, "with a chance to put it all together. We have the essential ingredients—support, funds, personnel and talent."

The music the USAFBB will play ranges from John Philip Sousa marches to the pop music of Gershwin and the jazz of Ellington to classical music of Aaron Copland. But it all has one thing in common—it's the music of America. Indeed, the type of music the band

will perform is a definition of its mission, which is, as LTJG Brittain said, "to take the history of America to the American people through American music."

Incidentally, this is one reason it was decided to add the chorus, because so much of our music is accompanied by lyrics—folk songs and Broadway show music, for example.

In carrying out its mission the band will play in every state's capital and as many cities as possible in between. They will also perform in some cities in Canada, Mexico, Puerto Rico and the Virgin Islands.

According to Dick Bain, the band's public information director (a Navy retiree), the complete schedule is not yet firm, but eight major tours, totaling 270 days, are planned. These will range from 30 to 58 days each. In between the long tours, when the band is back at Ft. Meade, there will be numerous short trips for special DoD assignments. Some of these will be in the national capital area, others include the Tournament of Roses in Pasadena, Calif., and Operation Sail in New York City.

On 24 March the USAFBB played its first public concert at the John F. Kennedy Center for the Performing Arts in Washington, D. C. This will be followed by the first road tour which begins (on 9 April) in Dover, Del., capital of the Union's first state. For the next 32 days this tour will, appropriately, take the band to places where America's War for Independence began—Lexington, Mass., Concord, N. H., and throughout the New England states. From there it's on to cover the rest of the country with a show guaranteed to stir the patriotic spirit of Americans everywhere in this our 200th as a nation.

—Story by JO1 Tom Jansing
—Photos by PH1 Rich Pendergist and PH3 J. Dorman

letters to the editor

Educational Benefits

SIR: I have a friend who got out of the Army recently and started college. His GI Bill money for school also started, but then he got a letter saying that, due to lack of money, he would not get it any more. He had to drop out of school.

I don't know all the facts concerning his case, so I can't say why this was done. But I would like to know if something like this can happen to me. Just what are the facts about the GI Bill?—TM3 C. A. T.

• *Here are the straight facts: Veterans who served on active duty for more than 180 continuous days, any part of which occurred after 31 Jan 1955, who were discharged or released from active duty under conditions other than dishonorable, are eligible for GI Bill educational benefits under the Veterans Readjustment Benefits Act of 1966, as amended. Each eligible person is entitled to educational assistance for a period of one and one-half months for each month or fraction thereof of his service on active duty, not to exceed 36 months. If he served 18 months or more, he is entitled to the full 36 months.*—ED.

Tug's Towing Record

SIR: During a recent period of operations, the officers and crew of the Fleet tug USS *Paiute* (ATF 159) made 27 successful tows of other units. This was accomplished during an 85-day cruise of which 68 days were spent at sea, covering over 15,000 miles.

We don't believe that 68 days at sea, or 15,000 miles traveled during that time, is any kind of a record, but we do feel that 27 tows, consisting of hook-up and release—night and day, with seas from two to 10 feet, winds zero to 20 knots—may very well qualify us for a towing record, especially in view that this was accomplished without any personnel casualties, machinery failures or equipment damage. The lightest tow was 7000 tons; the heaviest was 15,000 tons.

By the way, our official ship's slogan is "*Paiutes* are better tuggers." We think we are.—BMCM J. E. P. (MCPOC), USN.

• *The only way we can determine whether the statistics qualify* USS Paiute *for a record is to make them known to the Fleet and see if there are any challengers. Meanwhile, congratulations to the officers and crew for their splendid, accident-free record.*—ED.

Could Register be Wrong?

SIR: Twenty-five of the 109 non-limited duty officer warrants selected for permanent promotion to W-3 are listed in the 1973 edition of Register of Officers as temporary warrant officers. Is it possible to become a permanent W-3 without having been a permanent W-2? If not, could the Register be wrong or did someone goof?—CWO3 G. E. H.

• *Not only is the Register correct, but it is possible to become a permanent W-3 without having been a permanent W-2 as long as the W-3 completes nine years or more service as a warrant officer (temporary). It states in BuPers Manual, Art. 1020320, that "A male temporary warrant officer may apply for a permanent appointment after completion of three years or more service as a warrant officer (temporary)."*—ED.

'Lady at the Helm'

SIR: Concerning the article in the October 1974 issue, "Lady at the Helm," I'm curious as to any other changes that have taken place in the fleet charthouses since I reported to shore duty in 1972.

I did note one other matter: I was under the impression that the instrument being used jointly by QMSN Rachel Worley and a U. S. Navy ensign, was a sextant.—QMC R. M. R., USN

• *We received a few other letters from sharp-eyed QMs on this same subject. The first letter was routed to a learned source and we discovered that QMSN Worley is, indeed, using a sextant—not a Brandon sextant-type stadimeter (as the caption on the reverse of the photo indicated).*—ED.

Time Between Races

SIR: The typesetter is at it again. Your November 1974 issue, page 4, column 1, line 8 from bottom, says "members of the winning 1970 crew." Page 5, column 1, line 16 from bottom, says the last America's Cup races were held "back in 1960." Fourteen years is a long time between races.—A. S. L., LCDR (Ret).

• *Congratulations. You win the lead cup for catching the typographic twisters again. As we've said before, Nobody's perfect, and he was on leave.*—ED.

Outstanding Cover

SIR: Your October 1974 cover was outstanding, very timely for a birthday issue, and most appropriate to the name "ALL HANDS." Keep up the good work.—CDR J. D. Connery, USN.

• *Thanks. This particular issue was extremely well received by the Fleet and it has been very gratifying to hear from so many readers about it. Just exactly who it was that snapped the shutter for the photo is unknown to us, but we know that the result represents the combined efforts of* Kitty Hawk's *photo officer, public affairs officer and her hardworking photo lab crew. And let's not forget to thank the crew, too.*—ED.

Wearing of Peacoat

SIR: A recent Navy uniform change authorizes Navy women to wear the men's blue working jacket with their working uniform. Can the men's peacoat also be worn by a Navy woman with the working uniform?—PN3 C. D. E.

• *Sorry. Women are authorized to wear only the men's blue working jacket with the working blue/dungaree uniform.*—ED.

Delta Queen Mention

SIR: In ALL HANDS, September 1974, page 54, you have a very informative article about the *Delta Queen*. I am sure my fellow Cincinnatians do not fully realize her naval history.

However, the folks of Cincy would be offended by that article, as I was. Not once is the Queen City (Cincinnati) mentioned. To add insult to injury, the *Queen* is pictured in Louisville. Every year the *Delta Queen* and the *Belle of Louisville*, another Ohio River steamboat, have a race from Cincinnati to Louisville, the *Queen* having the better record of the two. So, to a Cincinnatian, seeing the *Queen* pictured in Louisville is like a San Franciscan seeing the Golden Gate Bridge pictured in Los Angeles.—AZ3 M. L. F.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, Jefferson Davis Highway, Washington, D. C. 20360, four months in advance.

- USS *Memphis* (CL 13)—A 50th-anniversary-since-commissioning reunion is being planned for April or May in San Diego, Calif. Contact H. Fischer, 164 "I" St., Chula Vista, Calif. 92010 for details.
- USS *Cambria* (APA 36)—A reunion of WWII crew is planned for 25 May in Houston, Tex. Contact Ed Worrel, 4322 Littleberry Rd., Houston, Tex. 77088, or telephone (713) 448-7778.
- USS *Ticonderoga* (CV-CVA-CVS 14)—A reunion is planned for 9-11 May in Atlantic City, N. J. Contact Ed Mingle, 751 Manor Dr., Brick Town, N. J. 08723.
- USS *Lexington* (CV 2)—The 22nd national reunion is planned for 25-28 Jun in Philadelphia, Pa. Crew, squadron personnel and Marines who served aboard from 1927, when she was commissioned, until 8 May 1942, when she was sunk in the Coral Sea, contact Walter D. Reed, 5410 Broadway, Oakland, Calif. 94618.
- *U. S. Naval Group China*, The Sino-American Cooperative Organization (SACO)—The 21st annual reunion is planned for 26-29 Jun in Colorado Springs, Colo. Contact Carl W. Divelbiss, 900 Luhrs Tower, 45 W. Jefferson St., Phoenix, Ariz. 85003, or David J. Clark, 718 17th St., Denver, Colo. 80202.
- *Composite Squadron 91* (VC 91)—A reunion is planned for July in the midwest area. Contact Ed Spencer, 9105 Burley Dr., Bethesda, Md. 20034, telephone (301) 530-5219 or (202) 797-5446.
- USS *Cony* (DD 508)—Former crewmembers interested in holding a reunion over the July 4th weekend in the Foxboro, Mass., area contact Luke E. Terpstra, 195 South Street, Foxboro 02035.
- USS *Enterprise* (CV 6)—A reunion is planned for 24-26 Jul in Seattle, Wash. Contact Edward H. Doss, 1606 28th St., S. E., Auburn, Wash. 98002.
- USS *Northampton* (CA 26)—A reunion for those who served in her between 1930-1942 is planned for 24-26 July in Las Vegas, Nev. Contact R. Rene, 5284 Appian Way, Long Beach, Calif. 90803.
- USS *Wasp* (CV 7)—The 3rd annual reunion is planned for 25-27 Jul in San Diego, Calif; former members of the crew, squadrons and Marines who served in her from precommissioning to 15 Sep 1942, when she was sunk in the Coral Sea, contact T. J. Wilkes, 1313 Aswan, Corpus Christi, Tex. 78412.
- *LST 1141*—A reunion is planned for Korean War veterans for 1-3 August. Contact E. H. Sallee, RR 1, Bowling Green, Mo. 63334.
- USS *Astoria* (CA 34)—The second reunion honoring the 33rd anniversary of Savo Island is planned for 7-10 August in Gearhart, Ore. Contact Ken Cruse, 625 E. Edison St., Hillsboro, Ore. 97123.
- *River Patrol Force* (TF-116)—The eighth annual reunion of the Gamewardens of Vietnam Association, Inc., is planned for 16 August in Norfolk, Va. Contact YNCS John C. Williams, USN, P.O. Box 5523, Virginia Beach, Va. 23455.
- *26th Naval Construction Battalion*—A reunion is planned for 18-21 September in Dayton, Ohio. Contact Harry Friedrich, 3671 Mockingbird Ln., Dayton, Ohio 45430.
- USS *Reid* (DD 369)—A reunion is planned for 19-21 September in Milwaukee, Wis. Contact Robert T. Sneed, 1537 North 59th St., Milwaukee 53208.
- *Mine Warfare Force*—Any active duty or retired personnel who have served in any unit of the Mine Warfare Force and are interested in holding a reunion in November in Charleston, S. C., contact HMCS Jim Donovan, USN (Ret), Mine Force Association and Reunion Committee, 1220 Hillside Dr., Hanahan, S. C. 29406.
- USS *Monterey* (CVL 26)—1943-46 personnel interested in a reunion in Boston, Mass., contact Manlio Nota, 50 Sherbrooke Ave., Braintree, Mass. 02184.
- USS *Davis* (DD 395)—A reunion of WWII crew is planned for April in Washington, D. C. area. Contact David S. Fowler, 414 Turtle St., Syracuse, N. Y. 13208.
- USS *Oklahoma* (BB 37)—Reunions are planned for 1-4 May in Baltimore, Md., and 23-25 Oct in San Diego, Calif. Contact Omar C. Keller, 5003 Western Dr., RFD 4, Fremont, Neb. 68025.
- Noncommissioned Officers Association of the United States of America (NCOA)—The 14th annual convention will be held 2-6 Apr in Houston, Tex. Contact Mr. C. A. "Mack" McKinney or Mr. Fred E. Darling, 110 Maryland Ave., N. E., Suite 510, Washington, D. C. 20002, telephone (202) 546-7891 or 546-7892.
- *V-7 and V-12 Navy classes of 1944, 1945 and 1946*—A reunion is planned for 18-19 April at the University of Louisville-Speed Scientific School. Contact Will Morrison, Jr., Box 460, Dickson, Tenn. 37055, or phone (615) 446-8087.
- *U. S. Naval Test Pilot School*—The 27th annual reunion and symposium for TPS alumni is planned for 3 May at the Naval Air Test Center, Patuxent River, Md. Contact Public Affairs Office, U. S. Naval Test Pilot School, Patuxent River, Md. 20670.
- *30th Naval Construction Battalion*—The 30th reunion of WWII veterans is planned for 23-26 May in Scranton, Pa. Contact Mario Bevilacqua, 519 Third St., West Pittston, Pa. 18643.
- USS *Picking* (DD 685)—A reunion is planned for WWII veterans for 9-13 July at Williamsburg, Va. Contact Dr. Leroy Steiner, 4301 Wythe Ave., Richmond, Va. 23221.
- USS *Valley Forge* (CV 45 & LPH 8)—The fourth annual Valley Forge Reunion Club gathering is planned for 25-27 July at San Diego, Calif. Contact John B. Trahan, 2301 Melrose St., National City, Calif. 92050.
- USS *Washington* (BB 56)—The USS Washington Reunion Group is planning its 12th gathering for 14-17 July at Seattle, Wash. Contact John A. Brown, USS Washington Group Inc. (BB 56), Box 27035, Columbus, Ohio 43227.
- USS *ABSD 1*—A reunion is planned for 25-27 July in New Orleans, La. Contact W. G. Herman, Rt. 1, Box 110, Urich, Mo. 64788.
- *115th Naval Construction Battalion*—The sixth reunion is planned for WWII veterans for 31 Jul-3 Aug in Champaign, Ill. Contact Edward C. Plummer, 5023 E. Naomi St., Indianapolis, Ind. 46203, or phone (317) 359-6990.
- *VC-91*—A reunion for officers and crew is planned for 17-20 July in St. Charles, Ill. Contact Ed Spencer, 9105 Burley Dr., Bethesda, Md. 20034, or phone (301) 530-5219 or (202) 797-5446.

NOW HEAR THIS..

As in all military services, the links between chains of command are being tested constantly. Sometimes two-way communications end up being interpreted slightly differently from the initial transmission. The following comes to us courtesy of ex-ALL HANDS staffer, JOC H. George Baker, now retired from the Navy and Editor of that fine magazine, "Army in Europe," published by the Headquarters, U. S. Army, Europe, and the Seventh Army. He in turn had received it from the 501st Transportation Co. unit newspaper "Breakdown."

We quote from that publication, with only the military ranks and terminology changed to their equivalents in the sea service.

A hypothetical admiral issued the following order to the ship's company.

"Tomorrow evening, at approximately 2000, Halley's Comet will be visible in this area, an event which occurs only once every 75 years. Have the men fall out on the flight deck in dungarees, and I will explain this rare phenomenon to them. In case of rain, we will not be able to see anything, so assemble the men in the hangar bay theater area and I will show them films of it."

The CO relayed the order to the XO:

"By order of the admiral, tomorrow at 2000 Halley's Comet will appear above the operating area. If it rains, fall the men out in dungarees, then march them to the hangar bay theater where this rare phenomenon will take place, something which occurs only once every 75 years."

The XO relayed the order to the department heads:

"By order of the admiral, in dungarees at 2000 tomorrow evening, the phenomenal Halley's Comet will appear in the hangar bay theater. In case of rain in the operating area, the admiral will give another order, something which occurs once every 75 years."

One department head passed the directive on to his division officer:

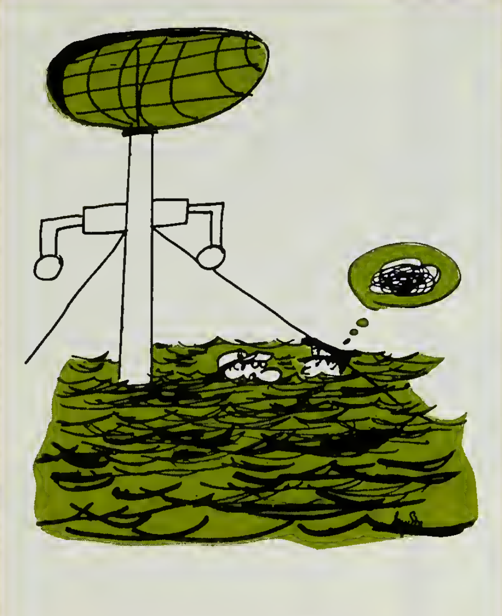
"Tomorrow at 2000, the admiral will appear in the hangar bay theater with Halley's Comet, something which happens every 75 years. If it rains, the admiral will order the comet into the operating area."

The division officer's announcement in the formation the next morning:

"When it rains tomorrow at 2000 hours, the phenomenal 75-year-old Admiral Halley, accompanied by the captain, will drive his Comet through the hangar bay in dungarees."

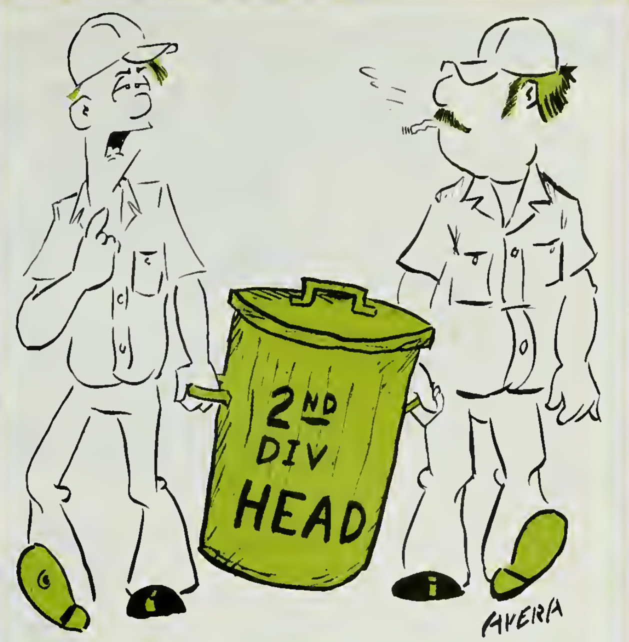
Regardless of who's giving the order or who's receiving it, to be effective, the communication must be properly transmitted. Just something to keep in mind.

PHAN Edward Stubler



"How should I log this, sir?"

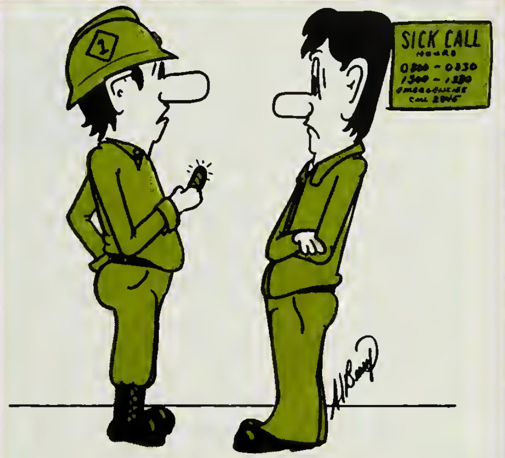
YNCS Gerald Avera



". . . and then I said, Chief, what can you do to me? This is the NEW Navy."

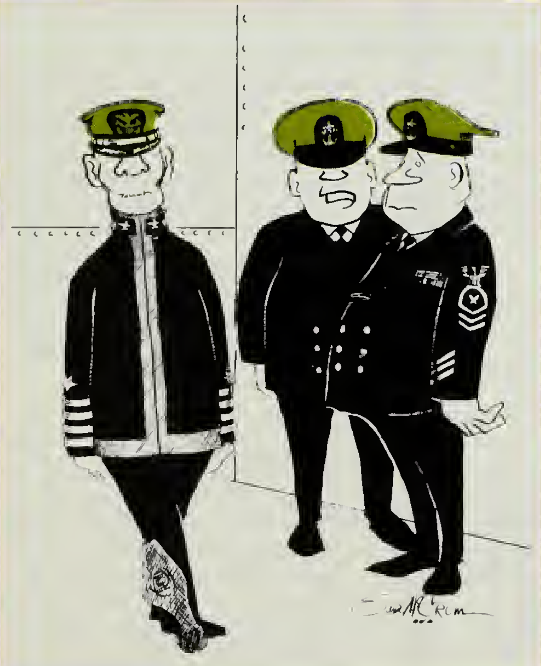
on the serious side

DK2 Alan Berry



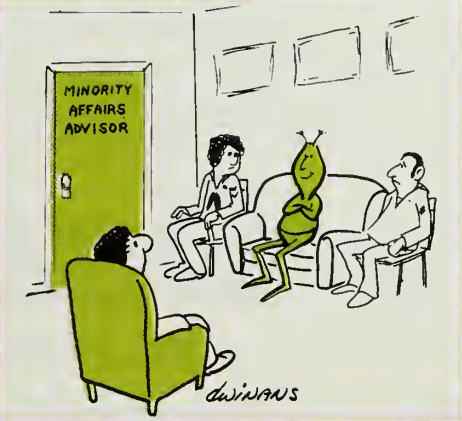
"But, it's my coffee cup finger . . . are you sure I can't get a no-duty chit?"

JOC Sam McCrum



"There goes the Old Man."

CTA1 Donald Winans



TAFFRAIL TALK

It's like a windy desert. All that's visible are a few power lines and roofs of buildings buried in the Antarctic snow. Atop one roof is a bold sign, "Bubbles' Truck Stop Open 24 Hours A Day—Free Coffee."

This, reports JO1 Bob Rainville, USN, is the mess hall at Williams Field, Antarctica, the arrival and departure point for supplies and scientists working on projects with the National Science Foundation.

Williams Field, five miles from McMurdo Station, is the home for 200 officers and enlisted men of VXE-6, the air arm of the Navy's Operation Deep Freeze, who have since returned to the States at the end of the summer support season.

Upon entering "Bubbles' Truck Stop," you're aware of the aroma of freshly baked rolls and pastries. In the background you'll hear a cheerful laugh from Williams Field's most popular man, CS1 Charles J. Maitland, also known as "Bubbles."

The 14-year Navy veteran has spent the last three and one-half years with VXE-6. "I'm the best cook in the Navy," he claims, "except my wife, but then she ain't in the Navy."

Bubbles' Truck Stop, open around the clock during the austral summer, provides a warm meal or a good cup of coffee to VXE-6 pilots and maintenance and flight crews. The stop has a reputation for serving fine food, such a reputation, in fact, that at times VXE-6ers make the five-mile trip from the main McMurdo Station just to eat Bubbles' food. Why? "Well, I am a firm believer that every day is a holiday and every meal is a banquet," exclaimed Bubbles with a hearty laugh, his trademark.

According to Journalist 1st Rainville, the men of VXE-6 who eat at Williams Field agree it's possibly the best food they've ever had and there's never a shortage.

Maitland takes pride in his work, he enjoys his job and knows good food helps the morale at Williams Field.

"These men work 12 to 14 hours a day and really don't want to hassle with poorly prepared food," he says. "That's why there is tender, loving care put into every one of my meals. In fact, that is the primary ingredient," he adds.

* * *

Do you believe in fate? Then here's one for you. When Mark Bemis joined the Navy recently, he discovered that he and his recruiter, Navy Counselor Chief Edgar Johnson, Jr., were born 17 years apart on the same day. He also found out that on the very day he was born in Fort Worth, Tex., the chief joined the Navy in that same city. Now, if Mark becomes a Navy recruiter in Fort Worth 17 years from now . . . Well anyway, welcome to the Navy, Mark.

* * *

Division officers and leading petty officers are like mother hens when advancement exam time rolls around. They're constantly reminding their people to "hit the books," asking rating-related questions and holding a sizable number of extra school calls.

All this effort paid off recently for the men in USS *Lapon* (SSN 661). Every one of the boat's 34 advancement hopefuls passed their test to give *Lapon* an almost unheard-of 100 percent pass rate. Well done to the new *Lapon* petty officers and selectees, and also to their senior petty officers and officers who cared enough, took the time to help their men in their professional education and made advancement in rate a reality for them.

The All Hands Staff

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

ORIGINAL ARTICLES and information of general interest may be forwarded addressed to the Editor, ALL HANDS, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, 2221 Jefferson Davis Highway, Washington, D. C. 20360.

DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for each five naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.

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IT'S TAKEN YOU YEARS TO GET WHERE YOU ARE TODAY.

WHY START ALL OVER AGAIN?

If you're finishing up your first hitch, you can ship out and start all over again. Or you can decide to ship over, and take on job responsibilities that a man your age on the outside might not be trusted with for several years.

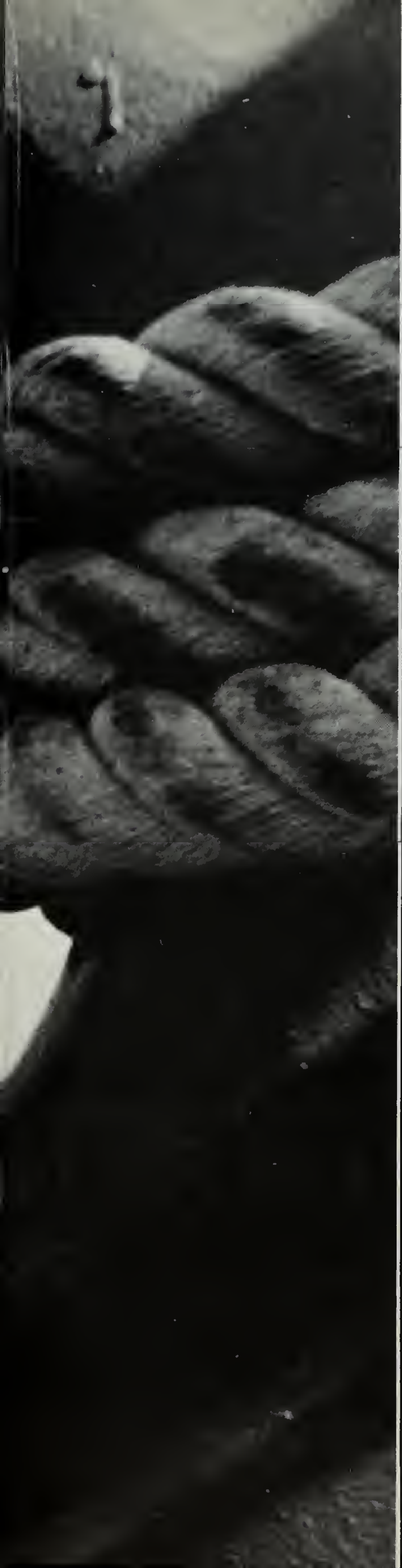
If you're thinking of getting married, Navy benefits can be even more meaningful. Increased housing allowance. Available medical care, plus things like job security and retirement benefits. They all add up.

So before you head off into the uncertain civilian job market, be sure there's a place for you in that market.

If you have questions, ask your Command Career Counselor. He can help you with your decision. No matter what it is.

DON'T WAIT TILL YOU GET OUT TO WISH YOU'D STAYED IN.

SOUTH CAR



ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

MAY 1975 NUMBER 700

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FRONT COVER: Movies are a hot subject in today's world, both inside and outside the Navy—as subtly suggested by ALL HANDS artist Michael Tuffli. It's not because of their flammability (Navy uses nonflammable safety film aboard ship and shore stations) but because of their subject matter. For more on the subject of the Navy Motion Picture Service and its circulating inventory of 36,000 movie prints, see the article appearing on page 26.

BACK COVER: The subject of energy conservation, especially in the use of automobiles, is a full-time, fuel-time job. For more on the subject see page 58. Art by Tuffli.

INSIDE FRONT: The newly commissioned USS South Carolina (DLGN 37) is moved into mooring position at Charleston Naval Station. Photo by PH1 Milt Putnam.

THE HRAV

"The Navy is concerned not only with ships and aircraft and weapons; it is concerned also with the human beings who operate these machines. The Navy is interested in all its men—their hopes and fears as well as their capabilities and their needs. It is interested in them as individuals and as groups of individuals who influence each other and . . . have a tremendous effect on efficiency . . ."

The naval "Division Officer's Guide" from which this statement was taken was prepared back in 1952. The manual devotes an entire chapter to both professional and personal needs of Navy people, and the responsibilities of the division officer as a leader.

The statement clearly supports the basic purpose of the Navy's Human Goals Plan, written over 20 years later. Concern for the Navy man or woman, both as a contributing member of the Navy team and as an individual, is not a new concern for the Navy. What is new is the comprehensive systems approach to improving command effectiveness by concentrating on leadership and management development and the human resources of an organization.

Just as the management of money and material is carefully planned and integrated in the Navy, so now is the management of human resources. This responsibility, traditionally that of division officers and leading petty officers, has all too often been relegated to second priority status in the face of material demands and operational commitments.

The Human Resource Management Program, one element of the "systems approach," focuses on developing the skills and self-confidence necessary to organize and supervise a group of individuals to obtain a full and productive team effort. The program recognizes leadership and management as the most important considerations in achieving command excellence and building good order and discipline, responsibility, authority and accountability, pride and professionalism, morale and teamwork.

Looking beyond program titles and objectives—and getting into content—provides us with some basic insights into what this nuts-and-bolts program for improving management is all about.

- Basic underpinning for the system is provided by a network of Human Resource Management Centers (HRMC) and Detachments (HRMD). These units provide the fleet and shore establishment with assistance in organizational development and management, equal opportunity/race relations, and drug and alcohol abuse education.
- Navy Human Resource Management Specialists, both officer and senior enlisted, all with recent fleet experience and specially trained for their assignments, help individual commands focus on their strengths and their problems, and assist them in developing ways to improve their efficiency.
- HRMCs have been established in Norfolk, San Diego, Pearl Harbor, London, and Washington, D. C. HRMDs are in Charleston, Jacksonville, Alameda, Guam, Subic Bay, Yokosuka, Rota, Naples, and Athens.
- The Human Resource Management Availability

EXPERIENCE

(HRAV) is an important element in this problem-solving approach to developing leadership and management. In essence, the HRAV is a scheduled period of time—much like a tender availability—usually about a week in duration, during which a command is free of major operational responsibilities to devote itself to the management training process provided and structured by HRMC personnel.

"It's time we emphasize the management of human resources," said Captain C. E. Gurney, III, commanding officer of the HRMC Norfolk. "Our Human Resource Management Availability is one period during the year when attention is focused on how we are managing our human resources. It's a sound concept; it puts the management of people on an equal footing with the management of machines."

The HRAV is preceded by a comprehensive organizational survey and by intensive planning discussions between representatives of the command and the HRMC staff. During the initial visit to the command, a support team of human resource management specialists briefs the commanding officer on the capabilities and services the center has to offer, and the broad objectives of the availability.

At HRMC Norfolk, CAPT Gurney attempts to participate in this initial visit whenever possible: "This opens a line of communication between the center and the commanding officer which can be used after an availability, and frequently is," he explained. The HRAV specialists, it is emphasized, are there to assist the commanding officer. Here's how it is accomplished.

- ***The* HRAV *Survey.*** The first real insight into just how comprehensive the HRAV process is comes for the crew when they fill out the human resources management survey. Developed in 1973, the survey is distributed to all members of the command who retain their anonymity while providing a candid, overall picture of their command.

Questions in the survey cover the areas of peer and supervisor leadership, teamwork, communication flow, decision-making, motivation, training and the effectiveness with which the command has implemented other programs that are a part of the human resource management system, such as equal opportunity and race relations. The commanding officer may add questions of his own if he so chooses.

Questions are answered on a point scale ranging from "very satisfied" to "very dissatisfied." After processing by automated equipment, the survey results are prepared as a statistical summary. Team members then return to the command to feed back this information to the commanding officer and assist in its interpretation.

"The commanding officer doesn't have to buy a thing I say when I bring the survey results to him," said Lieutenant Commander D. O. Straight, a human resource management support team leader at the center in Norfolk. "It's his ship, his command, and he uses me as he sees fit." The survey is only a management tool, and only a place to start, added LCDR Straight.

- ***The Survey findings.*** The survey can only show "perceptions," explained Lieutenant K. A. Murray, a human resource management specialist at HRMC Norfolk. "It cannot determine reasons or explain why 'perception differences' exist.

"Once the command understands what the data means, they can take the survey results and correlate *what's being said* with *what actually occurs* in the command.

"I think when a command receives the survey results they're pleased—since now, for the first time, they can look at perceptions that people have from an objective third-party viewpoint," continued LT Murray. "It's not the command asking their people what they think—in which case the crew might feel required to give a good response or say what they think the supervisor wants to hear—it's us doing it, an objective third party."

The survey can be helpful to the commanding

THE HRAV EXPERIENCE

officer in indicating both the strengths and weaknesses of his command. If it shows a strong positive response in the area of team effort, the commanding officer may determine that his supervisors are effective and efficient. If it shows a negative response in an understanding of the command's mission, further clarification or communication may be necessary in this area.

While the survey is an important factor in pinpointing areas for discussion and treatment, the commanding officer of each unit determines the direction of the HRAV. Once he has reviewed the survey findings, he is able to determine those areas he feels should be dealt with in the availability process. The results of the survey, combined with his knowledge of the command, provide him with a complete representation of the perceptions of his crew.

"Human resource management specialists do *not* evaluate, compare or prescribe," emphasized CAPT Gurney. "No human resource management specialist presumes to know more about the command than the commanding officer."

Whatever his decision, survey results are confidential. The only person authorized to give any information on what transpired during the human resource management availability is the commanding officer himself.

- ***Action Areas and Workshops.*** The HRAV itself is a team approach to problem solving led by the officers and petty officers of a command, and structured by the members of the human resource management support team. Action areas, expressed by the commanding officer, are dealt with in workshops. The workshops themselves fully adhere to Navy protocol and procedure. Out of the workshops come statements of each problem area, objectives, and recommended courses of action. The commanding officer then reviews the recommendations and assigns priorities.

Action areas range from breakdowns in communication, such as enlisted men bypassing chief petty officers and relating directly to junior officers, to the simple, expressed need in the ranks for explanation or management from supervisors for prompt action during what may seem to be a manufactured crisis.

Above: Crewmembers complete the Human Resource Management Survey, the first step in the process. Right top: HRMC Norfolk support team members LT D. Shelton and CPO John Brown help provide survey feedback and assist in interpretation for Fort Snelling's CO and XO, Cdr James C. McIndoe and LCDR William P. Hunter. Right bottom: CDR R. E. Greer, CO of USS Newman K. Perry, reviews feedback with Chief Petty Officer J. E. Lacey, a human resource management specialist assigned to HRMC Norfolk.

LT Murray cited examples of what could surface during a command action plan workshop:

"Probably every command has a list of job descriptions for the personnel in that command; there's a file somewhere. Yet you can go up to people time after time and find out they really don't know what their job is. How many times does a person take over a new job and not find out that he has to get a report in on a certain day or that he has a collateral duty until the report isn't in or the collateral duty isn't done? It happens all too frequently. Why? Not because the job description isn't there: it's because it's never really used.

(→)

"... More than 225 commands have gone through an HRAV. Reactions have been positive. Participating commanding officers cite marked improvements in retention, teamwork, motivation, functioning of the chain of command, discipline and morale. ..."

THE HRAV EXPERIENCE

"In a certain division, the division officer and leading petty officer may think that they're doing a fine job of getting the word out. Yet what may happen is that you have a group of non-rated personnel showing up for a working party only to find that because two division officers or department heads didn't coordinate, that the crane that's supposed to be hauling the supplies on board has been shut down for maintenance.

"Now the supplies are sitting on the barge with the working party standing around wondering, 'why can't we do what we're supposed to be doing?' They perceive that work activities aren't sensibly organized. To them that's a work activities organization problem. To the division officers and leading petty officers it's a communication problem. One division didn't let the other know that the crane was needed at that particular time, or that the barge was coming alongside."

Incidents such as these, while serious at the time, usually affect only those people within the particular division or work group involved, and do not indicate command-wide problems. They do indicate an area, though, in indoctrination of new personnel, or subordinate-supervisor communications flow, or work activities organization, for improvement.

The realization that a problem does exist, and action to counter it, are not the tasks of the human resource management specialists; they provide assistance and guidance when needed, but responsibility for command action rests with the individual commanding officer.

"The whole idea is that the command itself, and people within the command, especially middle management, assume responsibility for ensuring that the issues of human resource management are handled within their department or division or work center, and that it will continue whether or not a specialist is there," explained Commander S. A. Fink, training officer at the HRMC Norfolk.

"There's no way any of the responsibility could be assigned to anyone outside the chain of command," the commander added.

- ***The Command Action Plan.*** Setting out management objectives and milestones, the command action

Above: USS Newman K. Perry (DD 883) recently completed the Human Resource Management Survey. Right: The aim of Navy's "systems approach" is command and crew effectiveness, symbolized here by the crew of one ship, the Perry (DD 883). Facing page: USS Fort Snelling (LSD 30) is one of 225 commands that have gone through an HRAV.

plan is a product of an HRAV. Directions are set, commitments are made, and the command is well on its way to improving effectiveness and efficiency in a programmed, orderly fashion. Actions promoting improved leadership and human resource management have become part of the command's daily operation.

More than 225 commands have gone through an HRAV. Reactions have been positive. Participating commanding officers cite marked improvements in retention, functioning of the chain of command, teamwork, motivation, discipline and morale.

In the end, of course, it all comes down to people. Commands are people, and the success of Navy missions depends on a dedicated professional core of experienced men and women. As CAPT Gurney noted, "we work on the assumption that the majority of the Navy's people are naturally proud, motivated, and sincere, and they are looking for a way to contribute to the Navy's mission."

Through its Human Resource Management Program the Navy has implemented a dynamic servicewide effort to respond to the complex leadership challenges of the 1970's and 1980's. The limitations of the HRAV are readily admitted by the specialists at the centers and detachments. They see themselves as true consultants whose job is to expose problem areas and suggest avenues relevant to each command for approaching those problems.

"Our purpose here at the center is not to eliminate problems for the commanding officer, but to help him uncover them, and give everyone under his command 'a piece of the action' in solving them. We can help the commanding officer get more productivity out of his people, help him locate the areas of brains and energy and harness them up to the mission," CAPT Gurney concluded.

The success of human resource management as a structure for meeting command challenges has been tested and proven, but this does not mean that the challenges have diminished. As the program continues to tell its story in the fleet and shore establishment, chiefly by what it does, it will become better known and understood for what it is: a commitment to command excellence.

—JO3 Jan Holmes USN

What's Your Retention Climate ?

HOW DO YOU

An important requirement of the All-Volunteer Navy is retention. Not just retention—but retention of qualified personnel. Retention depends on a number of things, ranging from job satisfaction to living conditions and pay. It is also dependent on what some people call working conditions. Commanding officers and career counselors in the Fleet have told the Chief of Naval Personnel that they feel command policies and leadership are the two major areas that can set the right climate or adversely affect retention. On the following pages are a series of questions which indicate just how important are these two factors. Command policies and leadership reach into every department of your ship or unit. They can create a good climate—or a counterproductive climate.

Here is a list of questions which can serve as indicators for the personnel of your unit—not just the command itself but the middle-management officers and petty officers. They can help you rate and evaluate the "retention climate" of your organization.

How does your command rate?

Internal Communications:

☐ Is the chain of command strong, efficient and responsive?

☐ Are internal communications effective?

☐ Are regular command/departmental calls held?

☐ Are all hands aware of the unit's mission and their contribution to it?

☐ Is adequate notification of operating schedules provided in sufficient time to allow for personal planning?

☐ Are all hands informed on the "state of the unit" as compared to other units in the squadron?

☐ Is important material such as career grams, notices, instructions, CHINFO grams, etc., routed to all hands?

☐ Is there an active and sound Human Goals Program?

☐ Are request chits and correspondence forwarded through the chain of command in a timely manner?

☐ Are career information items run in the plan-of-the-day?

☐ Is there an organized indoctrination division for newly arriving sailors?

Advancement in Rate:

☐ How many personnel were eligible for the last advancement exam and how many participated, passed or PNA'd?

☐ What's being done at the Division or Department level to encourage exam participation?

☐ How many will be eligible to take the next exam? How many plan to take it?

☐ Can those figures be improved?

☐ Does the training program in your Department/Division provide time and assistance to prepare for advancement exams?

☐ Is there an active striker selection board?

Career Counseling Programs:

☐ How well does the command career counseling program function?

RATE YOUR SHIP ?

☐ Is it effective?

☐ How often are counseling interviews given?

☐ Does the program use appropriate CINC/TYCOM instructions as a basis?

☐ Are the retention aids provided by BuPers put to good use?

☐ Does the program include counseling or briefing of spouses?

☐ Is the program aimed only at first-term personnel, or is the entire command involved?

☐ Does the personnel office give the career counselor administrative support?

☐ Does the career counselor have direct access to Autovon and other communications facilities?

☐ Is the career counselor briefing individuals to be separated on the PRISE I/II Programs (for broken service reenlistments)?

☐ Does your command regularly send officers and senior petty officers to CIAC (Career Information and Counseling School)?

☐ Is your command or unit sponsoring and supporting an officer retention program?

☐ Does it attempt to retain Fleet Reserve-eligible and Reserve personnel?

☐ Does your career counselor have access to the CO and XO on a routine basis?

☐ Are the division officers and senior petty officers effectively discharging their responsibilities within the command retention structure?

☐ Does your career counselor have a private office to conduct interviews?

☐ Is your career counselor plagued with other collateral duties?

☐ Do each of your departments and divisions have designated individuals as contact points between the shop and the command career counselor?

☐ Does your career counselor have a working relationship with the local recruiter?

EAOS Turnover:

☐ How many personnel do you expect to reach EAOS in the next six months?

☐ Do you expect to lose any career personnel at EAOS or to the Fleet Reserve?

☐ How many of your first-term and career personnel got out of the Navy in the last six months? Why?

☐ What had been done to retain these people?

☐ What in your estimation would get more of them to reenlist?

☐ How many sailors reenlist to stay on board?

☐ How many ship over for orders?

☐ How would you analyze these last two items?

Self-Improvement Programs:

☐ Is there any significant sponsorship or encouragement of self-improvemennt programs?

☐ If so, what is the participation rate?

☐ How successful are your programs?

☐ Are all hands aware of in-service educational benefits of the GI Bill, as well as tuition aid, PACE and NCFA (Navy Campus for Achievement)?

Readiness:

☐ How does your command compare with others in combat, material and personnel readiness and safety?

☐ Are the members of the crew or the command kept informed of the comparison?

☐ Do your maintenance and operational personnel have adequate test equipment and material support?

☐ Can it be improved?

Discipline:

☐ How does the unit's number of masts and courts-martial compare to the Fleet average?

☐ What was the nature of most of the offenses? Are the same people repeatedly involved as either the offenders or as the reporters of offenses?

☐ Can the number of offenses be reduced through more positive leadership?

☐ Do department heads, division officers and petty officers take care of minor problems, or do they simply "write them up?"

Quality of Recruits:

☐ How many have been sent to "A" school?

☐ Do you have any candidates you would like to send to "A" school but haven't?

☐ Why haven't they been sent?

☐ How many of your personnel are not working in their rating? Why?

☐ Do you assist in recruiting efforts directly and indirectly?

Job Satisfaction:

☐ Is sufficient authority and responsibility given to middle management and junior officers and senior petty officers?

☐ Is the watch bill fair and equitable?

☐ Is there an established system for rewarding topnotch sailors?

☐ Do you have a sailor-of-the-month/quarter/year program?

☐ Are enlisted evaluations carefully scrutinized by responsible individuals for fairness and accuracy?

☐ Are evaluations and fitness reports prepared with appropriate thought and effort?

☐ Are they submitted on time?

☐ Does your command have esprit de corps, and are the personnel and their families involved in sports programs, charitable activities and social events?

☐ Does the command make periodic presentations or reports to dependents indicating concern for the family?

☐ Do you have an active sponsor program for new personnel reporting aboard and their families?

☐ Are personnel working in customer service areas providing services in a courteous and friendly manner?

☐ Are they explaining delays?

Local Assistance:

☐ Can your immediate superior in command provide any assistance in the above or in any other areas?

☐ Do you receive good support from the base, tender or other support facility? Can that support be improved?

Other Assistance:

☐ Can BuPers or other activities at the headquarters level provide any assistance in the above areas?

☐ Have you requested or received any assistance from these sources?

☐ Have you requested assistance from a Human Resource Management center or detachment?

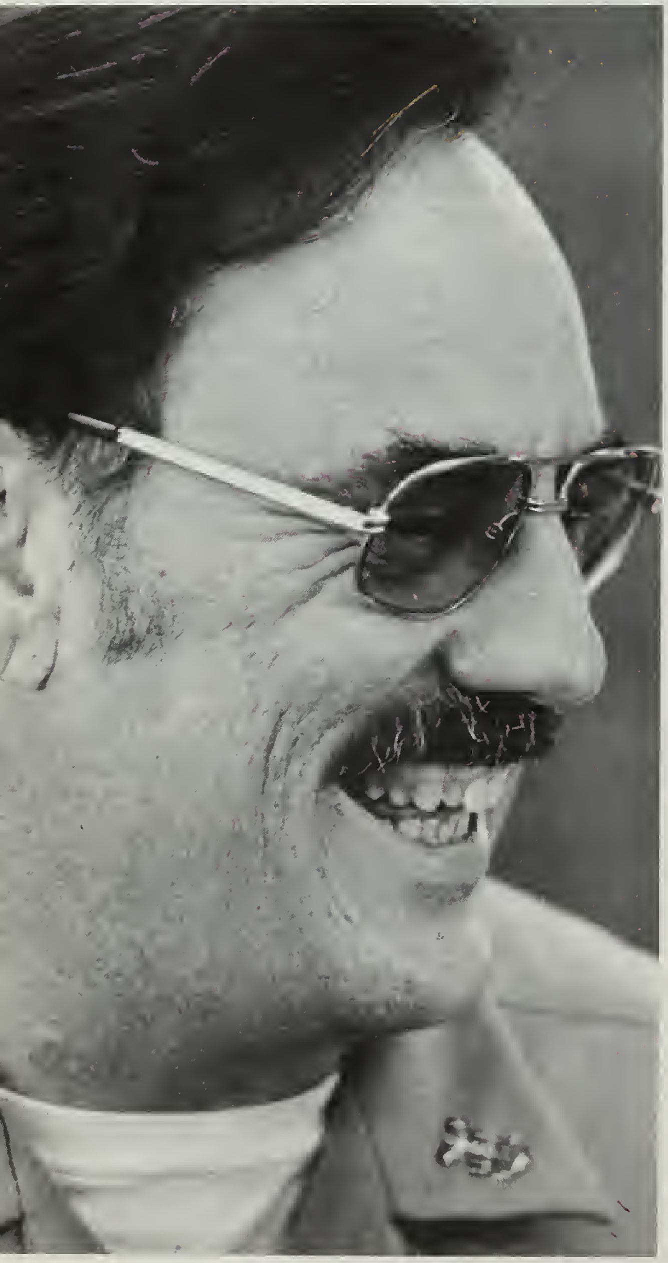
☐ Do all hands know about the BuPers career information Code-A-Phone?

☐ Is the retention program a command team effort?

☐ How can your program be improved?

SUB FORCE CAREER COUNSELORS

THEY'RE NUMBER ONE



The Navy desk in Washington which is checking on reenlistments in the nuclear submarine force was pleased and impressed by the consistently high reenlistment rates in the San Diego area. It was the best overall retention percentage for first-term and career personnel in the Pacific submarine force. Who/what was responsible? Here's the answer:

A typical working day at the Submarine Support Facility at Ballast Point in San Diego, Calif., begins not long after sunrise with the submarine tender USS *Dixon* (AS 37) holding morning quarters.

Tethered alongside, USS *Tang* (SS 563) and USS *Permit* (SSN 594) hold morning quarters-for-muster on the pier where *Dixon* is moored.

At the same time, three other Navymen at Ballast Point are beginning their day in their offices ashore. Their jobs are among the most important to the Navy today. They are the Career Nuclear Advisor for the Representative of the Commander Submarine Force Pacific (COMSUBPACREP), West Coast, and the career counselors for Commander Submarine Group Five and Commander Submarine Squadron Three.

Master Chief Electrician's Mate (SS) Gerhard W. Windscheffel, Senior Chief Interior Communications Electrician (SS) Henry Maine, and Senior Chief Electrician's Mate (SS) Dave Dickson have been largely responsible for providing submarines stationed in San Diego with the best overall retention percentage of first-term and career personnel for the Pacific submarine force.

Traditionally, the manpower needs of the Navy have been provided by a combination of recruiting and retention, but there is more of a need to retain the professional, career-motivated Navyman now than ever before. This is especially true at this time when the Navy is becoming more compact and seeking to become more efficient.

As Navy chiefs Windscheffel, Maine and Dickson perform their duties, they work together and complement each other, but they are individuals. And their individuality works for them.

How do they make career counseling work? Let's take a look.

EMCM (SS) Gerhard W. Windscheffel has been a part of the Navy since 1944. He works for Rear Admiral

John G. Williams who is COMSUBGRU Five. In his capacity as Career Nuclear Advisor, Windscheffel is available to counsel all enlisted nuclear trained personnel in the West Coast area.

"I consider myself the world's oldest living enlisted 'Nuke'," Windscheffel likes to remark.

He was about to retire in June of 1974 because he had decided that most of the Navy's challenges were behind him. He changed his mind when he was offered the job of nuclear advisor assigned to COMSUBPACREP, West Coast, for the benefit of all nuclear-powered ships in the Pacific area.

"This is a challenging billet and I like it."

His workdays are demanding. From the time he reports for work in the morning until he goes home, sometimes at late hours, his telephone is always ringing. His office is filled with nuclear-trained sailors with questions about the future.

Chief Windscheffel said that civilian industry tries hard to attract nuclear-trained Navy machinist's mates, electrician's mates, electronic technicians, and interior communications electricians.

In finding retention incentives for such highly trained personnel, Windscheffel has used an easygoing, soft-speaking manner to communicate his message.

Navy jobs can be more exciting than their civilian counterparts, he said, owing to the chances for travel and adventure. He said that comparable money can be made when an individual's regular pay, pro-pay and selective reenlistment bonus are combined.

Also, educational opportunities are easier to obtain in the Navy. There are many difficulties involved in going through college after discharge, under the G. I. Bill.

"Most people returning to civilian life never really make a success of going to school while also fighting the cost of living after getting out," said Chief Windscheffel. "Some of the problems that veterans

Facing page: Master Chief Electrician's Mate (SS) Gerhard W. Windscheffel. Above: Windscheffel pays a visit to USS Permit's career counselor. Right: A "team concept" meeting with (from left to right) CDR J. F. Sullivan, Commanding Officer, USS Permit; LTJG E. M. Keyser III; PO2 K. L. Harris; PO1 J. K. Hadden, Permit career counselor; PO2 K. T. Hughes; and EMCM Windscheffel.

have making it as civilian students encourage sailors to think twice about getting out.

"An alternative," he said, "is for the Navyman to apply for duty at a 'C' school and teach other Navymen as well as teach himself. Navy schools attended are worth college credits. An even better incentive is to take advantage of the Navy Campus for Achievement Program."

Master Chief Windscheffel also points out the "responsibility that goes with being a nuclear-trained sailor in today's Navy as an additional incentive. The submarine force is considered by many to be the backbone of all our armed forces. Nuclear missile submarines are the principal deterrent for our national defense.

"But reenlistment is not our only goal," he says. "We try to make the sailors we meet feel wanted. What has proved most effective for submarines in the San Diego area is the team concept of the ship's captain, executive officer, and career counselor working together to understand and help solve the personnel problems.

"I think there is more than one reason why we have a high reenlistment rate," he adds. "It's not just because we have good career counseling. A career counselor is not a ship-over petty officer."

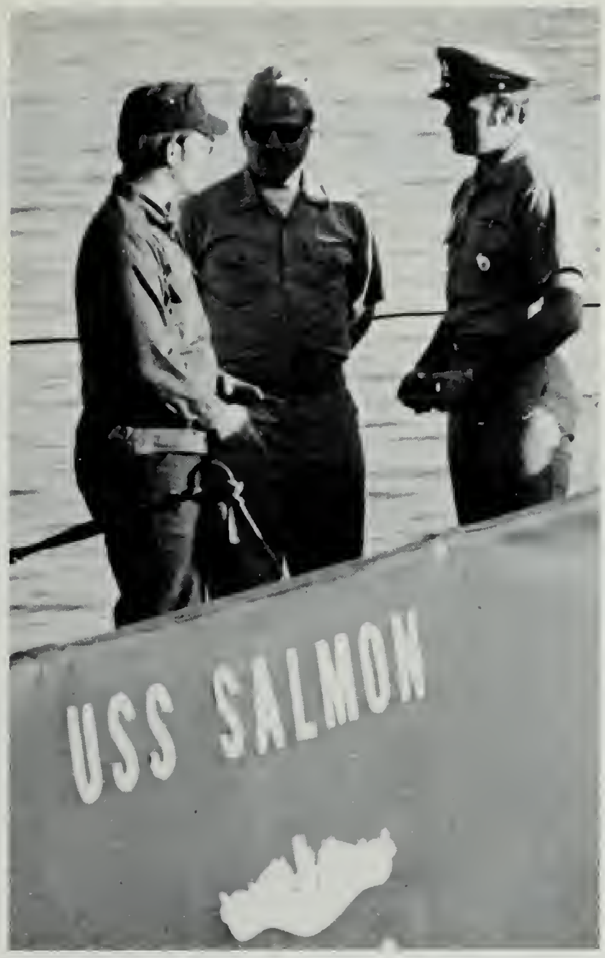
EMCS (SS) Dave Dickson is very much in agreement on this point. Dickson is an intense, serious man, enthusiastic about his work. He serves as the counselor for COMSUBRON Three, which consists of nine submarines and one tender.

Says Dickson, "It's not a matter of waiting until a guy completes four years in the Navy, then saying to him, 'All right, now you're getting close to being a civilian, we're going to treat you right and we're going to reenlist you.' "

Dickson said that on any submarine or ship with a high reenlistment rate, the high rate is due to the cumulative effect of the way the ship has treated its people in the past.

"There are many things that make a guy want to

Above: Career counselors (left to right) MMCS (SS) Dave Dickson, ICCS (SS) Henry Maine, and EMCM (SS) Gerhard Windscheffel work closely together. Facing page top: ICC (SS) Maine's job as a career counselor often calls for personal visits, in this case with STS3 Glenn Hinkle and FTGC (SS) Tony D. Hammer. Facing page bottom: Senior Chief Dickson advises MM3 Harry Nuce, a USS Sculpin crewman.



reenlist, and I don't think that these things are impressed upon that guy during his last 90 days of service. It is what he has seen during his entire first enlistment."

Emphasized by Senior Chief Dickson was the need to make Navy personnel aware of special programs designed to help them. He cited an example: "Submarine Squadron Three—from the commodore right down the line—is a big believer in the Human Goals Program. It's really carried out. If an enlisted man has a problem, or puts in a chit, he won't have to wait nine months for them to act on it. That's what it's all about."

Senior Chief Dickson has been a COMSUBRON Three counselor for six months and he faces two and one-half more years of duty—and he enjoys it.

"Evidently," he said, "I do like people."

ICCS (SS) Henry Maine works directly for Commander Submarine Group Five, Rear Admiral John G. Williams.

"It's both challenging and fun when you work with people, when people have a problem and you can tell them how to solve it," said Senior Chief Maine. "The Navy's reenlistment benefits program is so complex now that you have to be sure that you don't mess them up with the selective reenlistment bonus, or make a mistake that would cause them to lose money, or reenlist at the wrong time. The results," he said, "can be disastrous.

"For example, we saved a guy $300 when we counseled him to wait until the first of the month before shipping over, thus preventing him from losing one month of SRB pay."

Maine went on to say that a career counselor has to listen to and understand each problem as it is put before him. The career counselor's job is a job where every detail is important, when dealing with people's futures.

Senior Chiefs Maine and Dickson, along with Master Chief Windscheffel, maintain a close working relationship with BuPers detailers.

"We can talk the same language as the detailer," said Chief Maine, "so we don't waste his time. I have a squawk box connected to the phone on my desk and I use it, with the man I'm representing present, when I am discussing his questions with the detailer. In this way the information provided by the detailer is completely understood.

"Detailers are very cooperative, although they are in that office many hours of the day and the phones are always ringing. It's a very tough job."

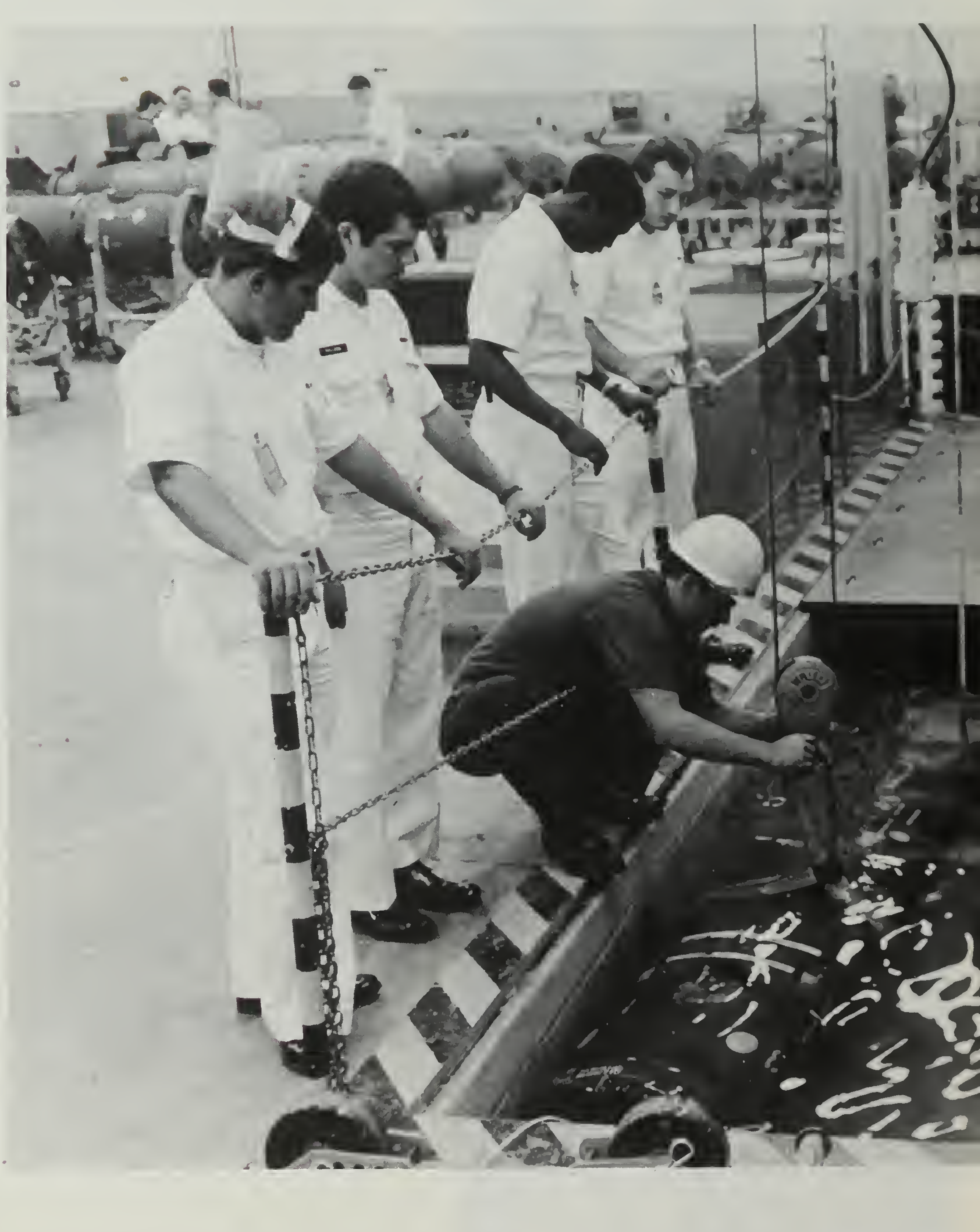
Chief Maine cited two reasons why Dickson, Windscheffel and he have had effective results. "We keep up on what benefits are available in any way that we can. The only thing that keeps a career counselor effective is the support he gets from BuPers and from his command. Those are the two big factors. In our case, it is the cooperation we receive from all the commands we work with, which is excellent."

And what about the future? "One hundred per cent retention," he answered. "That's what I'd like to see."

—Story and photos by PH2 Douglas Cunningham, USN.

In Today's World : A Continuing Need For

EXPERTISE IN



MINE WARFARE

The art of mine warfare has recently reemerged as an essential adjunct to both military and political operations. In this day, when nuclear holocaust is a constant threat to the world, mine warfare has become an acceptable—yet limited—method of waging war.

More and more nations have realized that mine warfare may be used as a method of attrition against enemy shipping, an antisubmarine warfare weapon, a mercantile blockade, and an integral part of amphibious assault operations. The lengthy and extremely successful harbor mining campaign in the Vietnam War sufficiently demonstrated the value of this versatile weapon system. Without these minefields, U. S. negotiations for the release of prisoners of war could well have been extended for months.

The equally successful "End Sweep" operation to remove these mines further established the necessity of mine warfare expertise in the U. S. Navy.

Recent minesweeping operations in the Suez Canal have also provided dramatic proof that the U. S. Mine Warfare Force is capable and prepared to assume worldwide mine warfare commitments.

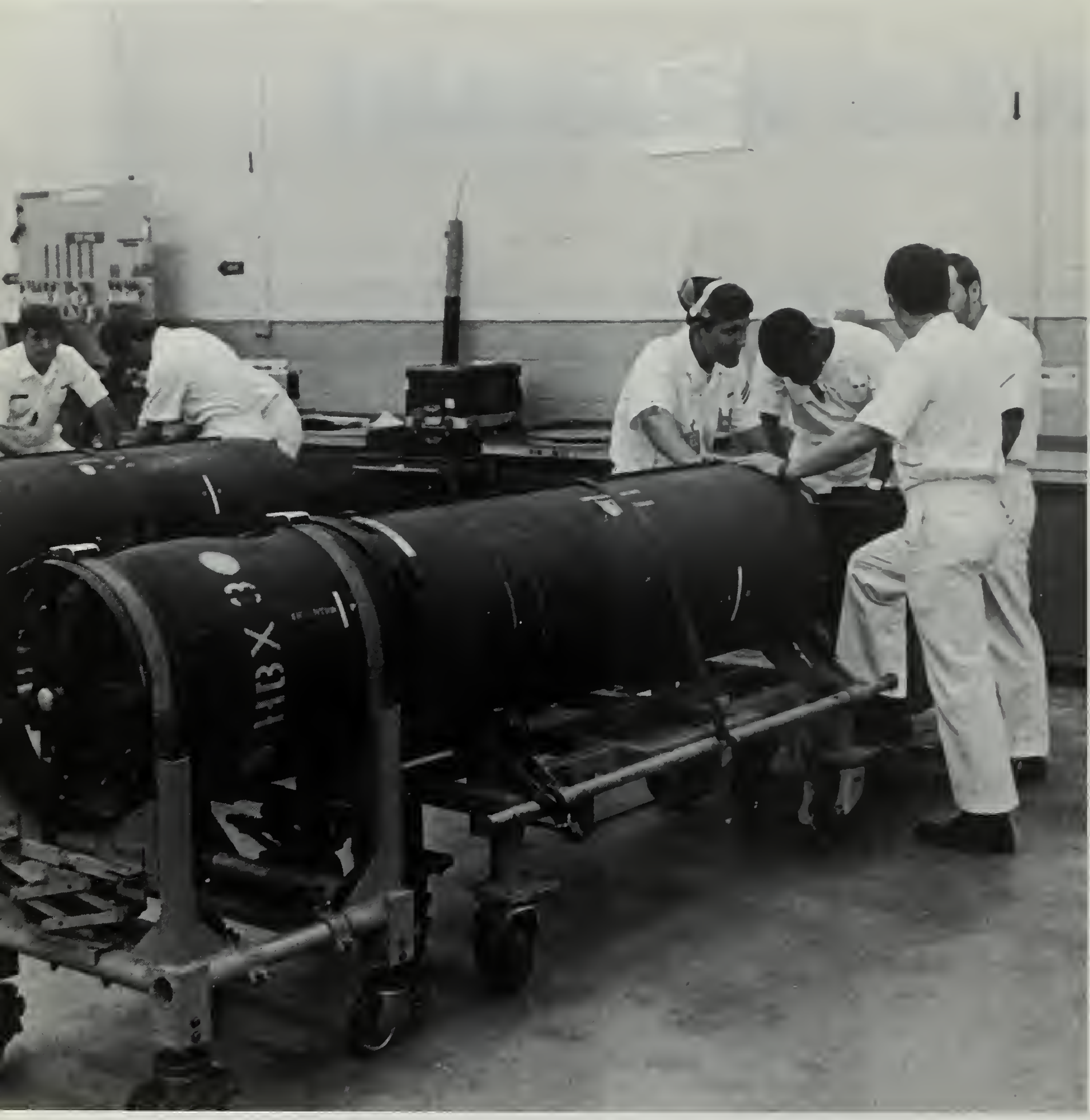
Expertise in sea mine strategy has generally been the exclusive province of a small, close-knit community of dedicated officers and men. Knowledge of various phases of mining and mine countermeasures exists in billets scattered throughout the fleet, in such areas as:

- Attack squadrons practice mining drops.
- Submarines execute fleet mine tests.
- Amphibious ships act as mobile platforms for helicopter minesweepers.
- Designated mine warfare ships continuously train in mine countermeasures exercises.
- Highly trained minemen (MNs) serve at naval ammunition depots, magazines, and pre-positioned mine sites around the world.

Primary source of all this expertise is the Fleet and Mine Warfare Training Center (FLEMINEWARTRACEN) at the Naval Base, Charleston, S. C. This command represents the largest source of mine warfare training in the free world and is the only Navy training facility where formal mine warfare training is offered.

At the training center, instruction is given in all phases of mine warfare including minefield planning, tactics, technical and operational aspects of mines and mine countermeasures equipment, and logistics and

Above: An assembled mine is checked for leaks.



administrative requirements. Specialized aviation, surface and submarine mine warfare instruction is offered for selected officer and enlisted personnel as part of other training in mine maintenance, material and operational details of mine warfare, surface and airborne countermeasures, ranging and deperming, electrical systems and minehunting sonar systems.

The Mineman Class "A" School, conducted at the Charleston center, provides prospective mineman students with a basic background in assembly, test, and preparation of naval mines.

Above: Students in "A" Mineman school assemble an anchor to a MK 57 mine. Facing page: Brazilian students in the Minewarfare Staff Officer Course, with their instructor, LT. R. Lessmann, USN (left to right), CDR Rogerio, CDR Goulart, CDR Cardozo and CDR Serqueira.

Areas of instruction covered are:

- Basic theory, operating principles, classification systems, and general capabilities and limitations of U. S. nonservice and service mines.
- Practical experience at testing mine accessories.
- Assembling and disassembling U. S. nonservice and service mines.
- Minor maintenance of mines and mine components.
- Correct use and care of test sets and tools.
- Safety practices and procedures along with mine assembly discipline.
- Ammunition handling and stowage.

Mineman petty officers are also offered advance training which goes into more depth than the "A" course. This course (Mineman Advanced Training) extends into areas only previewed in "A" School. Trainees are taught modular and special mines, troubleshooting techniques, repair and calibration procedures on test equipment and administration and logistics procedures necessary to efficiently run a mines shop.

Personnel destined for mine warfare-related duty, whether surface or air, rotate through intensive indoctrination courses to prepare them for their demanding assignments. The techniques are new to almost every student regardless of his rank or seniority. It is also at FLEMINEWARTRACEN that aviation attack and patrol pilots learn basics in minefield planning.

Special "road shows" (mobile training teams) also bring the classroom to a squadron on a periodic basis. This program has been particularly instrumental in generating mining interest in the aviation Navy.

Special mobile training teams also extend the Training Center's expertise to fleet units, including Reserve minesweepers having difficulty sparing personnel for school training. Selected instructors package a short training curriculum, complete with films, publications and the latest developments in the mine warfare community and travel to various east coast locations to present special training requested.

Most lengthy course offered is the mine warfare staff officers' course. This 20-week course of intensive academic and practical work is an in-depth study of the art and science of mine warfare. Graduates of the course, when awarded their Navy officer billet code of 9064, are fully conversant by then with all the facets of sea mines as individual weapons and weapon systems, minefield planning and mine countermeasures tactics and equipments.

In addition to traditional classroom and laboratory work, students function as members of teams solving hypothetical mining and mine countermeasures problems, using real world scenarios. Additionally, individual outside research on original term papers is required before course completion.

Upon graduation, students may be ordered to duty as planners on a major staff, CO/XO or other designated billets in a mine warfare force unit, in an overseas billet, or any job where the mission and tasks of the Navy require a resident mine warfare expert. In the near future, a highly sophisticated, computerized mine warfare tactical trainer will be installed in the center, affording a major increase in the quality and realism of training available.

With mine warfare rapidly becoming one of the most universally acceptable methods of limited warfare, many foreign governments have expressed a need and interest in building a well trained mine force.

During the past three years FLEMINEWARTRACEN has trained personnel—both military and civilian—from Brazil, Japan, Turkey, Australia, England, West Germany, Canada, and 20 other nations as well. By sharing mine warfare knowledge and expertise the Navy is strengthening the bonds with the allies of the U. S., helping to ensure the safety and preservation of the free world.

—Story by LTJG G. W. Stahl

Project Handclasp Delivery
Stopover In Indonesia

For all people, Christmas occurs the same day each year, but to the islanders on Ambon in Southern Indonesia, the holiday came at a different time this past year.

Thanks to the generosity of Americans of goodwill and the U. S. Navy, there were brighter spirits and more laughter on the island, located 1300 miles northeast of Djakarta, Indonesia's capital.

Ringing in the special Yuletide season was Commander Richard D. Milligan, skipper of the 4100-ton destroyer escort USS *Whipple* (DE 1062) and the 261 officers and men of the West Coast ship. They delivered a bonanza of Project Handclasp materials to the quiet island of some 10,000 inhabitants.

Project Handclasp comes under the umbrella of Navy Handclasp. It's a worldwide endeavor by organizations, companies and concerned individuals in the United States to aid people in foreign lands by donating clothing, sporting goods, and medical and school supplies.

Handclasp materials are delivered at no cost by U. S. Navy ships on a space available basis to a designated country where they are distributed by U. S. Navy personnel. The program is designed to foster mutual respect and understanding through a direct people-to-people line of communication.

This particular mission to Ambon began early last summer when *Whipple's* weapons officer, Lieutenant Lawrence V. Fairchild, contacted the West Coast director of Project Handclasp in San Diego and volunteered for a Handclasp mission. Commander M. C. Tevelson, the director, immediately swung into action.

"He handled all the arrangements," said LT Fairchild, "and really got things rolling. He made sure that all of the material was shipped and awaiting our arrival at Subic Bay in the Republic of the Philippines in late October.

"Although the idea originated on *Whipple*, CDR Tevelson really took the ball and ran with it," added Fairchild.

CDR Milligan recalled the brief stop at Subic to pick up the material. "We planned to be in Subic for three days to give ourselves ample time to get everything ready for the trip, but a typhoon sure messed things up. On our second day there, we were told to leave

Facing page: USS Whipple. Below: Curious villagers await USS Whipple's arrival. Right: Eager Indonesian children wait to board Whipple for open house.

that night to avoid the rapidly approaching storm.

"We really had some anxious moments because half of the crew was on liberty and we were only half finished loading the Project Handclasp supplies."

Reacting in the manner of destroyer sailors, *Whipple*men quickly had all the Project Handclasp cargo lashed down before the dark clouds of the typhoon settled in over the harbor.

En route to Ambon, the day's chores were interrupted by King Neptune and the traditional ceremony of "Crossing the Line" which was celebrated by all hands.

After a four-day journey, *Whipple* sighted Ambon; this marked the first time that a U. S. Navy ship had entered that harbor since World War II. Along the shoreline could be seen hundreds of children running from their bamboo huts to wave and stare at the sleek, gray vessel and her crew standing in formation. Small boats moved into the harbor to chance a closer view of the ship.

As *Whipple* moved to the dock, hundreds of villagers crowded onto the pier and shouted greetings to the visiting ship and her crew. As soon as the brow was over, many of the local dignitaries came up the gangway to greet the Americans. Meanwhile, *Whipple*men set about making the Project Handclasp material ready to be transported and distributed while working with their Indonesian Navy counterparts.

The new few days were spent participating in sports events, conducting tours of the ship, visiting orphanages, constructing a playground, passing out smaller packages of Handclasp materials, and generally getting to know the people.

Utilitiesman 2nd David Phillips of the Subic Bay-based Construction Battalion Maintenance Unit 302, who was aboard *Whipple*, said, "Working on the playground for the kids was the most rewarding part of the trip. We got a real warm feeling seeing all of those smiling faces after we completed the playground."

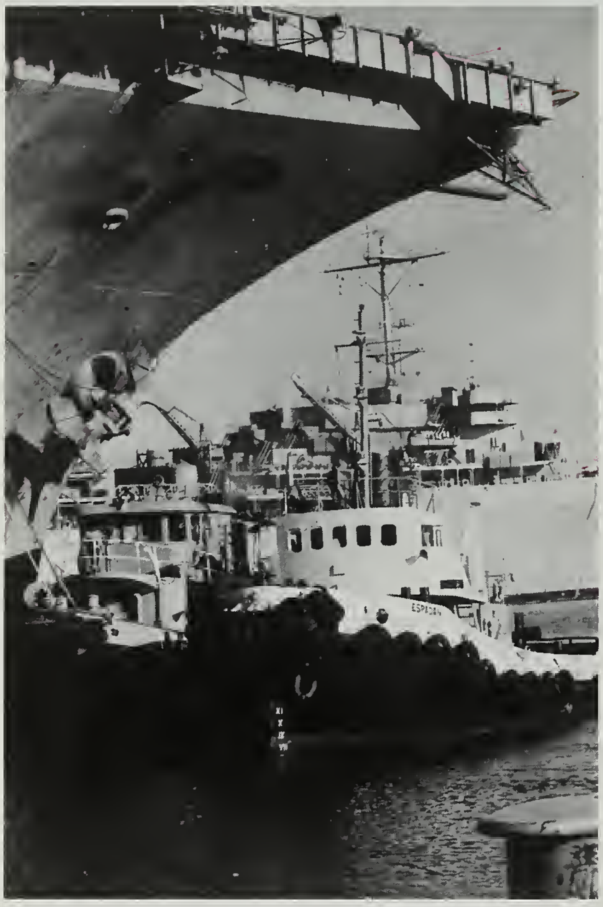
Another Seabee, Utilitiesman Constructionman Apprentice Gene Evans added, "Another thing that made us feel good was working with the Indonesian sailors. We worked side by side and felt that we were doing a little to help build friendship between our two countries."

The two Seabees assembled a jungle gym set, erected a basketball goal, built a large swing set, and strung a volleyball net.

For the rest of the Navy visitors, Ambon was a pleasant respite from the busy cities of the Orient. U. S. Navymen were literally surrounded by hundreds of children. Often adults would stop to say hello or just listen to their strange new friends from across the sea.

On the last night of the visit, the Indonesian Naval Base sponsored a picnic for the crew. Afterwards, many of the newly found Indonesian friends dropped by the ship to offer their thanks and say goodbye.

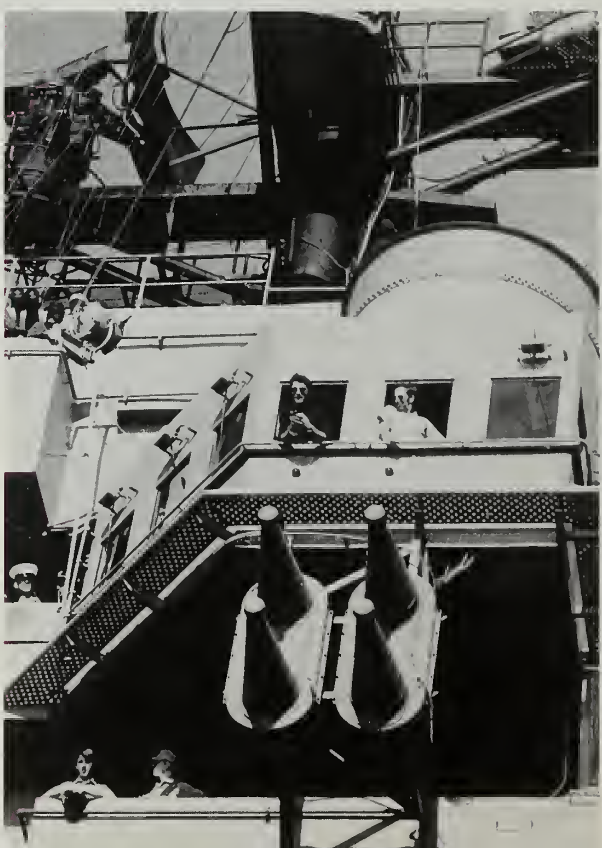
SARATOGA



If you ask people in Rota, Spain, the old question of how model ships get into bottles, they probably will tell you "very carefully." But the ship they will be talking about isn't a model; she's the 1040-foot aircraft carrier USS *Saratoga* (CV 60). She wasn't put into a bottle, but was guided ever so carefully into a pierside berth at Rota.

Normally a ship the size of *Saratoga* would anchor in the outer harbor of this Atlantic port, but this visit wasn't a normal one. A vital piece of aircraft navigational equipment had an inoperable antenna and Rota is one of few European ports with a crane large enough to change the antenna. Thus began a most delicate shiphandling exercise.

Planned and carried out by three Rota chief petty officers, the more-than-four-hour operation made *Saratoga* the largest ship ever to moor at a Rota pier. The record was previously held by USS *Intrepid* (CVS 11).



From left to right: Tugs from U. S. Naval Station Rota and commercial port of Cadiz assist Saratoga into her tight berth. Senior Chief Boatswain's Mate Gerald Goeden, senior harbor pilot for the naval station keeps a watchful eye as he "parks" Saratoga, the largest ship ever to enter the Rota port. Passing through the Rota breakwater, the aircraft carrier is slowly backed into the harbor. Friends and relatives of crewmen wait on the pier at the naval station.

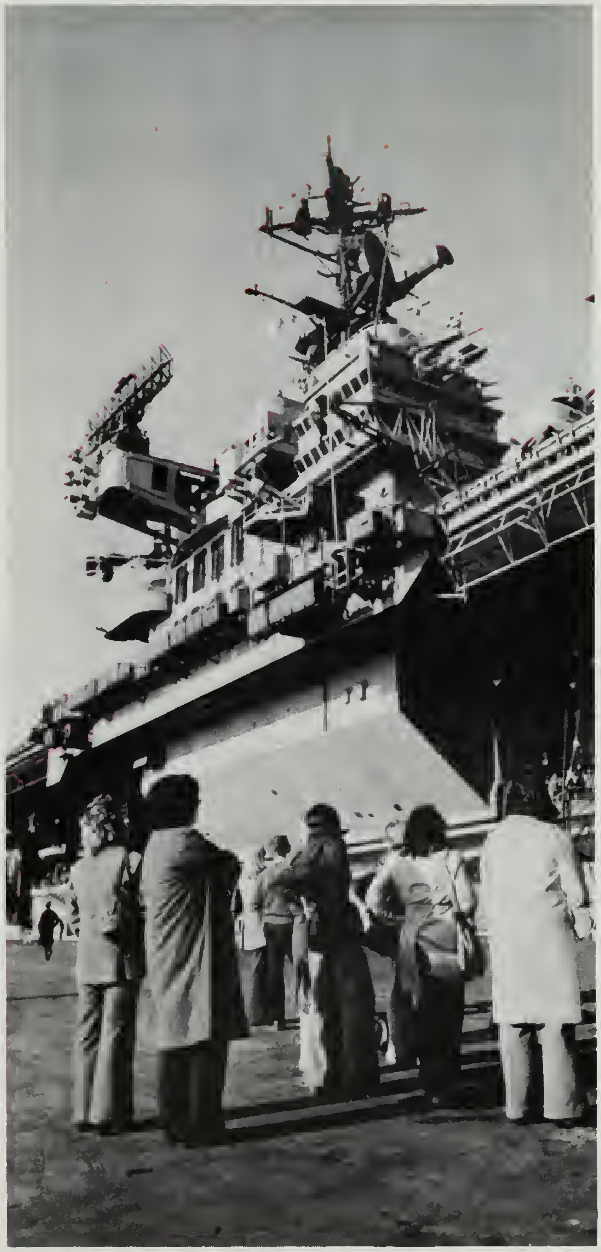
VISITS ROTA

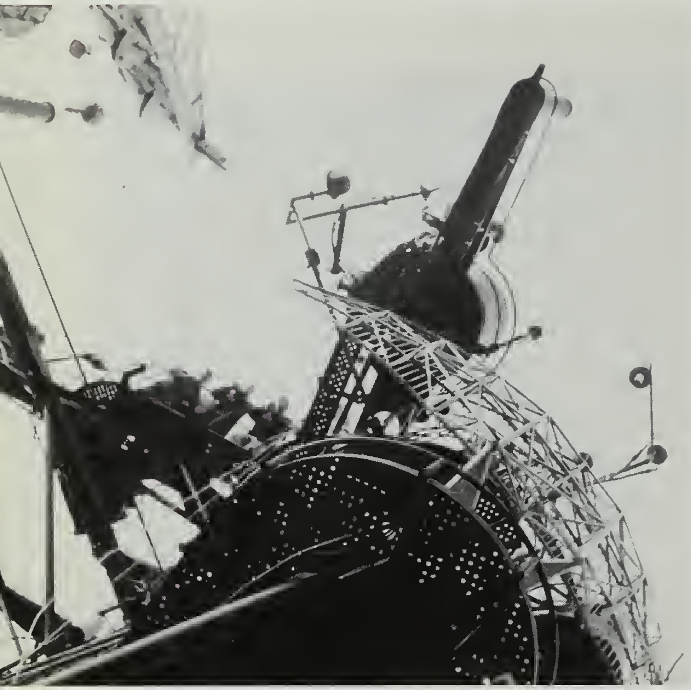
The Navy harbor pilots responsible for this feat were Senior Chief Boatswain's Mate Gerald Goeden, Chief Boatswain's Mate Benny White and Chief Quartermaster William Melay.

Representing a group of 35 pilots at Rota, these men are on hand to provide information and service in the harbor. Because of their extra training, these pilots take the conn of about 90 per cent of all ships entering Rota for the first time and *Saratoga* was no exception.

Captain Robert F. Dunn, skipper of the 19-year-old carrier, yielded the conn to Senior Chief Goeden when Rota's Navy tug force met the ship outside the harbor. Augmented by three civilian tugs, the force slowly turned *Saratoga* until she was headed stern first into the harbor. This was done so that the antenna in need of replacement would be within reach of the crane.

Once through the breakwater, the carrier was turned again and backed into her berth at about two or three





knots. At one point, *Sara* passed within 40 yards of the submarine tender USS *Simon Lake* (AS 33). According to pilot Goeden, this was one of the most critical parts of the operation. "It doesn't take long for a ship the size of *Saratoga* to eat up 100 feet if she gets out of hand," he said.

There were two other problems associated with bringing *Sara* into Rota—wind conditions and water depth. In this maneuver, wind was critical because it was blowing directly against one side of *Saratoga* at about 10 knots. The last major problem—depth of the water—was so critical that the ship was brought in on the rising tide. At low tide, there would be only a few feet of water between *Sara's* keel and the harbor bottom. If the ship had to use her own power to any extent, there would be danger that the powerful screws would set the ship on the mud bottom.

However, no problems occurred during this intricate mooring task and the ship was soon berthed. Within an hour after the first line went over to the pier, work had begun on the antenna.

Clinging 184 feet above the water, electronics technicians from *Saratoga*, aided by Navy and civilian tech-

nicians flown in from the United States, began loosening bolts and connectors and attached a special sling to the antenna. Work continued through the night and by midmorning the following day the new antenna was in place. Additional work to preserve the antenna connectors, bolts and align the unit added to the 140 manhours exerted in this rush job.

With the task completed and votes of appreciation extended by *Saratoga's* commanding officer, the ship left Rota for assigned operations.

Facing page top: Navy and civilian technicians replace an inoperable tactical air navigation radio antenna. Facing page bottom: A lifting device was necessary to lift the 432-pound antenna from the masthead, lower it to the pier, and lift the replacement antenna into place. Above: By working through the night, the technicians finally replaced the antenna. Right: The dome is lifted off the TACAN antenna and lowered to the pier.

WHAT'S TONIGHT'S MOVIE?

NAVY MOTION PICTURE SERVICE

Tucked away in a corner of the outermost reaches of the Old Brooklyn Navy Yard complex is a neat little building with a large sign out front proudly announcing to the world or anyone who cares, that here is the Navy Motion Picture Service providing *Films for the Fleet*.

While the corner building on Williamsburg Road and Flushing Avenue in Brooklyn, New York, overlooking the Brooklyn Queens Expressway with its busy traffic is hardly the crossroads of the world, it nevertheless houses a dynamic activity that is the center of a worldwide Navy Motion Picture Service. Wherever on the globe a Navy, Coast Guard or Military Sealift Command ship is operating, one or more movies originating from this small compound can be found. The same goes for any Navy, Marine Corps or Coast Guard shore activity anywhere in the world.

Everywhere, the "movie for tonight" originates in Brooklyn.

How did this all come about? Well, some time about 1919 when entertainment feature movies were silent and still in their infancy, the Navy established a motion picture service in the Brooklyn Navy Yard—not far from its present location—to procure and distribute this increasingly popular form of entertainment fare for its Navy and Marine Corps personnel.

That was more than half a century ago. The New York area was chosen as the site because it was then not only a film production center but also where the business end of the movie business was conducted. When movie industry production moved to Hollywood, the business end and its executive sales offices remained in New York.

For the most part, this is true of the major motion picture companies today, except that Hollywood is no longer the feature picture production center. Movies are shot all over the world today, and cities big and small and rural areas anywhere are now used to give realism and the "you are there" look to the telling of the story. All this is why the Navy Motion Picture Service remains in Brooklyn, carrying on its tradition of getting the latest and best in entertainment films for our people.

As for tradition—the historical pictures of the Navy Motion Picture Service on these pages point up the start of that tradition, and the pride the Navy Motion Picture Service has taken in its work from the very beginning.

Who is that actress in the photo? It is rumored by some that she is Estelle Taylor. If true, then she would be the one who later married Jack Dempsey prior to his first heavyweight championship title match with Gene Tunney in 1926.

The job of the Navy Motion Picture Service, as part of the Navy Special Services Administrative Activity, is to provide a worldwide motion picture service through the procurement and distribution of the most entertaining feature picture and short subject films available. This is accomplished through annual contracts with all the major, minor and independent movie producers and distributors.

These contracts give the Navy access to all their film production at a price to be negotiated (within a range of about eight different price categories). There is a lot of legal hodgepodge in these contracts since movies are copyright matter and the companies won't sell them outright.

The Navy gets a long-term lease (currently three years) and must return or account for all prints (copies) at the end of the lease. Restrictions are included with respect to the audience allowed to view the movies (primarily military and their dependents), to the places of exhibition (primarily shipboard and at theatrical facilities on Navy, Marine Corps or Coast Guard stations ashore, and to the accounting for attendance at exhibitions ashore.

Violations of these restrictions can be serious business, since they can mean not only breach of contract by Navy but copyright violation as well. Unauthorized use, theft or copying of these film prints can result in serious criminal penalties for the offenders.

- A word to the wise—these films do not belong to the Navy. They must move around during the lease period to realize their cost. Above all, do not hoard them, fail to report them, or fail to turn them in when recalled at the end of the lease period.

All these spell out critical tasks for the Navy Motion Picture Service and result in its requirements for per-

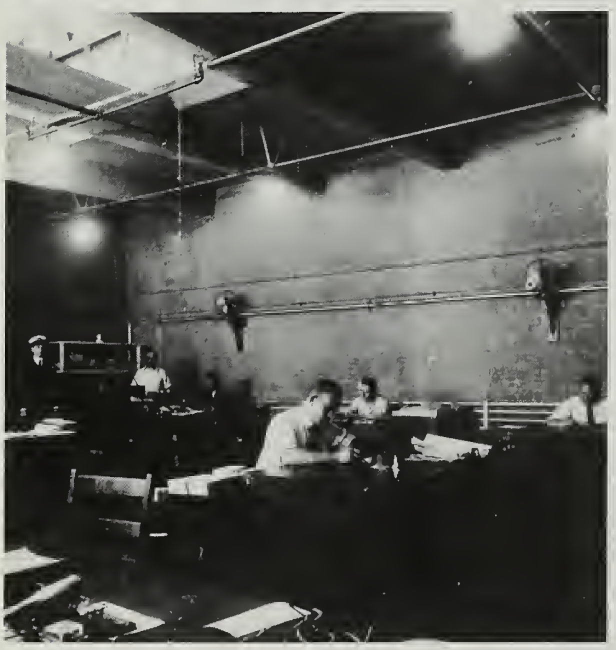
sonnel staffing, computers, extensive telephone communications and endless correspondence and paperwork in contract administration.

An ALL HANDS visit to the Brooklyn site gleaned some interesting facts.

- The Navy Motion Picture Service tries to get 208 new feature movies each year—in order to provide four different new movies each week.
- This goal has become increasingly tough to meet as the quality entertainment movie output has been declining in recent years.
- Current procurement involves 45 copies of each movie so that there is a *circulating inventory of about 36,000 movie prints* consisting of about 800 different feature picture titles. This makes for busy computer time to account for this tremendous inventory.
- The films you see aboard ship are free, but remember, movies cost money. The movie industry does not give away its product free to the Navy and contract negotiations are lengthy as well.
- Of the 50-cent admission fee charged ashore, the local command retains 22½ cents for operating expenses and sends the Navy Motion Picture Service 27½ cents to help defray the cost of procuring the movies.

Commander William H. Higgins, USN, is the officer in charge of the Navy Special Services Administrative Activity, and Mr. Jesse Marks is the civilian director of the Navy Motion Picture Service. A field office is maintained in Norfolk, Va., where a Fleet and overseas theater distribution manager plus an Eastern Area CONUS distribution manager expedite the flow and movement of the film prints along their scheduled paths.

Another field office is maintained in San Francisco where a manager performs similar duties covering Western CONUS and Hawaii. In addition to the five people heading these offices there are approximately 50 employees in these offices to perform the workload involved in building and maintaining that huge world-



wide circulating inventory of films for the Fleet and shore installations.

To assist the Navy Motion Picture Service in its task of reaching out to its scattered clientele, there are some 23 motion picture exchanges located worldwide, where fleet concentrations exist. They are under the technical direction of the Navy Motion Picture Service but are staffed by and under the direct control of the respective station commanders which support them. These Exchanges are the distribution arms of the Navy Motion Picture Service since they are the repositories and circulating film libraries for Navy entertainment movies. They also serve to police the system, and help maintain the films in good repair.

Just to keep films in good repair, it cost the Navy Motion Picture Service about $120,000 last year.

While chewing over all these facts, ALL HANDS thought it would be a good idea to ask CDR Higgins and Mr. Marks the *what*, *how* and *why* involved in the selection of the gems that daily and nightly light up our movie screens. As soon as the question was asked, CDR Higgins, a 1957 Annapolis graduate, and Mr. Marks, a lawyer-contract specialist with 29 years at the Navy Motion Picture Service looked at each other and smiled. No doubt the question had been anticipated—it was old stuff to these grizzled veterans of the movie wars. There was no wavering.

It seems that these two are the ones who select the movies that either plague or delight you.

They look at about 350 feature movies each year and if they find 208 good quality entertaining movies for the year, that means they reject at least 40 per cent of what they see. Don't envy them their task. They have to look at everything offered—otherwise, they can be accused of favoritism or unfair discrimination.

In between this bug-eyeing routine (or is it eye-bugging?) there are a constant series of telephone calls to answer, mountains of correspondence to get out, contracts to negotiate, prepare and issue, price dickering and a million and one other details. Exposed to such a variety of movie fare, these two officials most certainly need to be unemotional and objective in their appraisal.

The prime concern in selection is whether the picture will be entertaining for Navy, Marine and Coast Guard audiences. If they agree it is, they then enter into price negotiations which can often be a hassle. They do have guidelines for movie selection, which are contained in BuPers Instruction 5728.1A. If they see a movie and have a reasonable doubt regarding its acceptability in accordance with these guidelines, the movie is referred for screening to a BuPers screening committee for a decision. However, these two seem to know their job pretty well since their BuPers referrals amount to less than one per cent of the films submitted.

Here are some other interesting facts from our notebook:

- There are no prohibitions on the procurement of any rated films. Selections can even include X-rated movies if they meet the guidelines.
- "G" movies represent a small percentage, about 18 per cent of current movie output. "R" rated movies approach 40 per cent of the current output, and the in-between PG rating amounts to about 30 per cent.
- The Navy Motion Picture Service catches plenty of flack from viewers—those who want to see more "G" movies, those who want to see more "R" movies, and those who don't like particular movies. They never hear about the good ones, they only get the complaints. Somehow the fact is lost that the Navy Motion Picture Service does not *make* the movies—they only can *select* from the best movies available. (They really and truly try.)
- Movies are selected just as they are shown in commercial theaters. There is no cutting, censoring or alteration of any kind by the Navy Motion Picture Service. A word of warning—anyone who snips out some of the so-called juicy clips of current movies and hoards them is not only interfering with the entertainment value for others who want to see the whole movie, he is also committing a copyright offense. "Nuff said."
- Some other things about movies in general. It seems that the greatest percentage of steady movie goers are in the 18 to 30 age group. Therefore, the movie-makers, who as businessmen are after the most dollar return, pitch their movie content to appeal to that age group. Many of our sailors and Marines fall into that age category.

CDR Higgins and Lawyer Marks made another point worth noting: *No one movie can appeal to everybody.* Movie tastes vary with each individual, depending upon his home background, environmental background, religious training and general education. However, every

Facing top page: Classroom in the School for Motion Picture Operators, New York Navy Yard, 1920. Facing page middle: Silent movie star Estelle Taylor with naval officers. Facing page bottom left: Main office of the Motion Picture Exchange in New York Navy Yard about 1920. Facing page bottom right: Turn-in room at the Motion Picture Exchange, 1947, New York Navy Yard. Left: Instructor at Navy Training School for Sound Motion Picture Technicians gives lecture to students in the school's projection room.

movie made can satisfy the entertainment requirements of some if not all individuals.

In summing up this entire question CDR Higgins and the NMPS Director pointed to the following paragraph from a soon-to-be-published manual covering the Navy Motion Picture Service.

"Entertainment motion pictures reflect in their content the mood, customs, and culture of the times as they relate to average filmgoers in the U. S., who are mainly in the 18 to 30 age group. No film will satisfy everybody's taste in movie fare. Many films which are rated poorly by the professional critics go on to become highly popular box-office successes. Box-office bonanzas are what every U. S. film producer is reaching for as a means of recouping and profiting on his investment. American filmgoers want to see the most popular movies, even though today's standards in movie productions for the most part embrace nudity in whole or in part as commonplace, include profanity as a matter of course, and in telling it 'how it is' often condone unlawful acts and make heroes out of anti-heroes. Themes, stories and plots may outrage many, but nevertheless are successful in appealing to the average young American filmgoer. Accordingly, and in that context, the Navy Motion Picture Service endeavors to select the latest and best in entertainment films which appear on commercial theater screens throughout the United States."

It is soon apparent that these two NMPS officials are not narrow or strictly parochial in fulfilling their job requirements. Both wax enthusiastic about the variety of film "produce" that has been incorporated in the motion picture program.

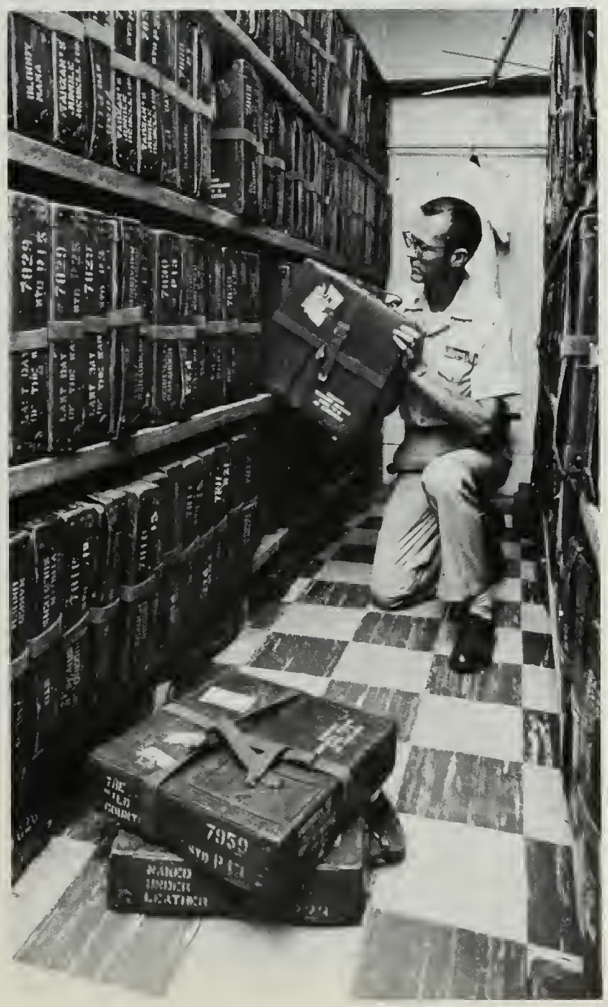
- In addition to the usual feature pictures and short subjects (although the cartoon is rapidly disappearing from theatrical production), they talked about the NFL Game of the Week, Pro Highlights and Post-Season football games that have been distributed, the fight films they managed to get at reasonable prices, and whatever other sports films have been made available.
- They are now in the process of concluding a deal with the National Hockey League to distribute copies of the NHL "Game of the Week" plus "The Stanley Cup" show.
- There is an ongoing project to procure more classic films to satisfy the film buffs who dote on movie lore.
- Their present library contains a few silents as well as a number of the greats of the "30s" and "40s". More are coming.
- The kiddies (dependents) are also not overlooked. There are quite a number of cartoon shows available as well as some 144 feature titles, tied together with 12 serials of 12 chapters each.
- Particularly high on their list is a new project they are undertaking to fit in with the upcoming Bicentennial. They are scouring film catalogues to line up a program group of feature pictures, past and present, which deal with a phase or significant episode in the history of the U. S. They expect that this addition to their library will prove to be very popular. They will publicize the titles to be available on request as soon as this procurement program is completed.

The Navy Motion Picture Service would like to reach everybody. It wants to be responsive to the entertainment requirements of all on a person-to-person basis consistent with its budget. There is a sincere desire to please everybody and in that context NMPS invites suggestions from all those who partake in the program. It knows that to the sailor aboard ship the movie is an essential morale factor.

This busy little place in Brooklyn knows what it is about. If effort, devotion and industry are essential for success, the Navy Motion Picture Service is a successful operation.

So, *Lights Out — Switch on the projector —* and, *Let's Get On With The Show.*

Below: Jesse Marks, director of the Navy Motion Picture Service. Right: With the help of the Motion Picture Exchange station, theaters can present current movies at military rates. Facing page top: CDR W. H. Higgins, officer in charge of Navy Special Services Administrative Activity. Facing page bottom: The Motion Picture Exchange in Subic keeps some 13,000 prints in stock at any given time.



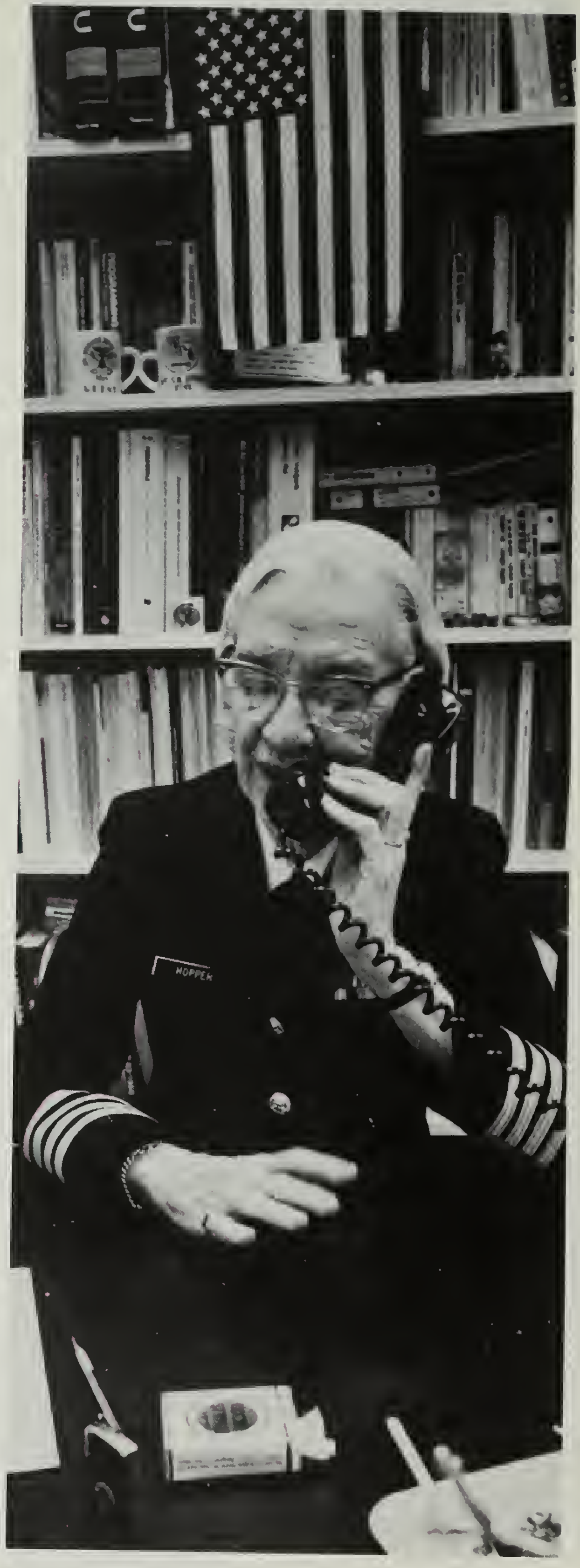
Latest Films Available to the Fleet

Here's a list of some 60 titles of the latest movies offered by the Navy Motion Picture Service for showing aboard ships and stations. They are listed in no particular order, but will give you an idea of the variety of films available to the Fleet.

Murder on the Orient Express
The Front Page
That's Entertainment
Airport 75
The Longest Yard
Juggernaut
99 and 44/100 Per Cent Dead
Claudine
The Taking of Pelham 123
11 Harrow House
Tamarind Seed
Lenny
Alice Doesn't Live Here Any More
Mysterious Island of Captain Nemo
10 Little Indians
Black Samson
The Abdication
Bootleggers
Born Losers
Our Time
The Girl From Petrovka
The Crypt of the Living Dead
Uptown Saturday Night
Phase IV
Shanks
Zandy's Bride
Golden Needles
Mixed Company
Badlands
The Dove
The Mad Adventures of Rabbi Jacob
Together Brothers
Policewomen
Buster and Billie
House of the Seven Corpses
Don't Turn the Other Cheek
A Visit to the Chief's Son
The Gambler
The Crazy World of Julius Vrooder
Open Season
Home Bodies
Big Bad Momma
Law and Disorder
The War Goddess
The Trial of Billy Jack
California Split
Amazing Grace
Alvin Purple
Bring Me the Head of Alfredo Garcia
Freebie and the Bean
Not Now Darling
The Beast Must Die
The Nickel Ride
Odessa File
Confessions of a Window Cleaner
The Towering Inferno
Mr. Rico
Rafferty and the Gold Dust Twins
The Man With the Golden Gun
The Little Prince
Sheila Levine is Dead and Living in New York
Report to the Commissioner
The Silent Stranger

The Lady is a Captain

SHE TEACHES COMPUTERS HOW TO TALK



Right: Captain Grace Hopper, Director of Programming Languages in the Office of the CNO.

". . . On the wall by her desk is a clock that runs counterclockwise . . . it is a constant reminder that just because something has always been done one way in the past doesn't mean it has to be done that way in the future . . ."

Amid many well-known figures with offices along the Pentagon's seemingly endless corridors is a "little old lady" who has attained international stature and received every major award in the automatic data processing field. This 68-year-old lady, a Navy captain, has probably contributed more toward development of the electronic computer than anyone else of her sex. Grace Murray Hopper is unique in her field.

Perhaps her most significant contribution has been her work in developing programming languages. Shortly after World War II, she developed a concept of automatic programming with a compiling system which enables the computer to write its machine instructions from human-oriented language instructions. From this concept, she developed the first compiler system which later led to the widely used computer language, COBOL (COmmon Business Oriented Languages).

"Nobody believed it could be done," she remarked. "Yet it was so obvious. Why start from scratch with every single program you write? Develop one that would do a lot of the basic work over and over again for you.

"Developing a compiler was a logical move but in matters like this, you don't run against logic; you run against people who can't change their minds." CAPT Hopper finds this true even today.

Upon her recall to active duty in August 1967, she was assigned as director of programming languages in the Office of the Chief of Naval Operations. The task accompanying this job was to standardize the high-level computer languages and get the Navy as a whole to use them.

In accomplishing this, CAPT Hopper constantly has been confronted by someone saying, "But we've always done it this way."

Jesting, she says, "I'm going to shoot somebody for that some day;" then adds, "In the computer industry, with changes coming as fast as they do, and they're coming faster all the time, you just can't afford to have people saying that.

"But, it's only natural. Human beings hate change, they resist change and yet changes are all around them. You have to persuade them to move with the changes. And, too, they have a terrible tendency to base their future projections on what they did five years ago, instead of what they're going to be doing a year from now."

A reverse (counterclockwise) clock on the wall beside her desk is a constant reminder to CAPT Hopper and her associates that just because something has always been done one way in the past doesn't mean it has to be done that way in the future.

In addition to being an author, a scientist, researcher, an educator and a naval officer, Miss Hopper is also a world traveler. Duties associated with her current assignment require that she travel more than 100,000 miles a year. So far, she has been in every state but one—Montana. When asked why not Montana, she replied, "They haven't invited me yet."

CAPT Hopper's lecturing tours have also taken her to Europe, Japan, Canada and countless other locations. Although this constitutes a very demanding schedule, Miss Hopper smiles and says, "I always get home weekends to wash my hair, wash my shirts and clean the house."

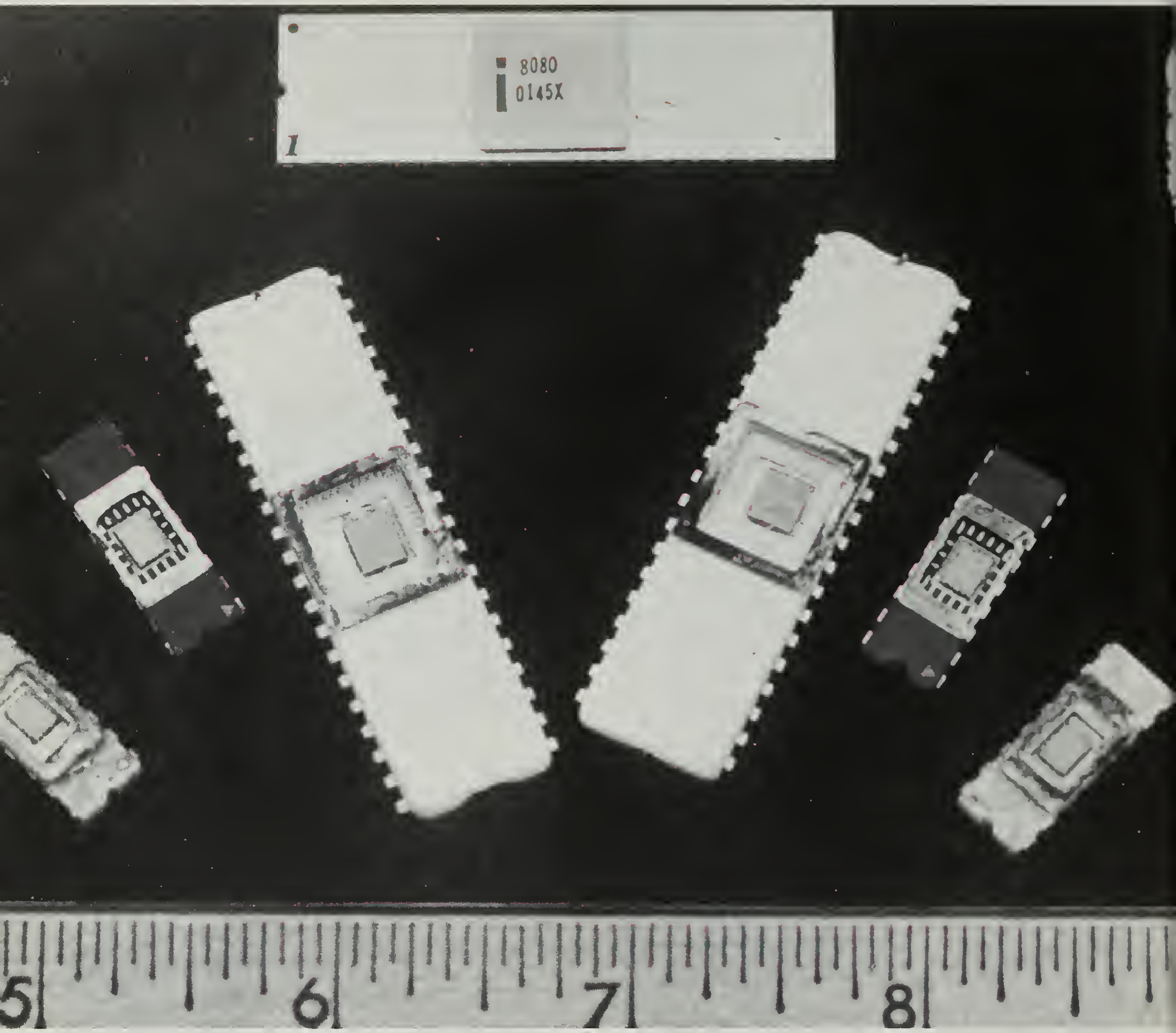
For computer pioneer Grace Murray Hopper, it's "Navy all the way." When asked why she chose a naval career, she becomes misty-eyed as she relates stories of a proud ancestry. She is a descendant of a Minute Man, an officer of the Pennsylvania line, a Civil War captain and her favorite, "the admiral," specifically, Rear Admiral Alexander Wilson Russell, her great-grandfather who served in the Civil War.

"I was about three years old when I first met him," recalls CAPT Hopper. "Although long retired, he was tall and straight, carried a black cane with a silver top on it and had white muttonchop whiskers which I had never seen before. He was a *very* impressive gentleman!"

Born 9 Dec 1906 in New York City, Miss Hopper claims Wolfeboro, N. H., as her hometown. "You can't call New York City a hometown," she exclaims. "From the time I was six months old, I spent all my summers in Wolfeboro. My grandfather, the Civil War captain in the New York State National Guard—the famous 7th Regiment—was the first to go to New Hampshire. He built a camp on the lake at Wolfeboro and as time went on, his children all built camps."

CAPT Hopper attended Vassar, graduating in 1928 with a degree in mathematics and physics, and grades high enough to earn a Phi Beta Kappa key and a Vassar College fellowship. With this fellowship, she then attended Yale University where she received her master's and doctor's degrees in 1930 and 1934, respectively. In addition, she was elected to Sigma Xi and received two Sterling scholarships.

"I had my degrees, but it was the Depression and there were no jobs, even for those with degrees. Vassar offered me a position teaching at $800 a year and I jumped at it." Miss Hopper successively became instructor, assistant professor and associate professor before leaving in 1941 with a faculty fellowship to study



Above: Microcomputers like these, already on board ship, have connections so narrow that they are measured in the number of atoms wide.

at New York University. The Navy was to benefit.

In December 1943, she entered the Naval Reserve and attended USNR Midshipman's School-W at Northampton, Mass. Upon graduation, she was commissioned a lieutenant (jg) and ordered to the then Bureau of Ordnance computation project at Harvard. Here she learned to program the first large-scale digital computer, Mark I. "That was an impressive beast," recounts CAPT Hopper. "She was 51 feet long, eight feet high and five feet deep."

When the war was over, she joined the Harvard faculty as a research fellow in engineering sciences and applied physics at the computation laboratories where work continued on the Mark II and Mark III computers for the Navy. A lieutenant at that time, Miss Hopper had asked for a transfer to the regular Navy, but she was 40 years old and the cutoff age was 38. However, she maintained her close ties with the Naval Reserve until retirement in 1966 at the age of 60. Five years later, she retired from the UNIVAC Division of Sperry Rand Corp.

"I seem to do an awful lot of retiring, but I don't think I will ever be able to really retire," says the mild-mannered captain. "I've always liked to work with either my head or my hands. I'm not content being a spectator."

That attitude, perhaps, somewhat explains why CAPT Hopper was willing to return to active duty in 1967 when the Navy extended her the call. A highlight of her current active service came on 2 Aug 1973, when she was promoted to the rank of captain. This promotion, made possible only following an act of Congress, marked the first time in history that an officer in the Naval Reserve was promoted to captain while on the retired list. The same ceremony saw Miss Hopper receive the Legion of Merit.

Her career includes a long line of "firsts," awards and other honors. She and her brother, whom she fondly refers to as a "renegade" because he served in the Army Air Corps during World War II, share some common awards. These include doctorate degrees, Phi Beta Kappa membership, holders of the Legion of Merit and mentions in "Who's Who."

For more than four decades, CAPT Hopper has been actively engaged in education. In addition to serving on the staffs of five universities, she has published more than 50 articles on automatic programming in the past 23 years.

In August 1971, at the 25th anniversary of the Association for Computing Machinery, UNIVAC initiated an annual award in CAPT Hopper's name. Consisting of $1000 and a certificate, this award goes to the young man or woman who contributes the most to computer science.

According to CAPT Hopper, "The nice thing about this year's award (1974) is that it was given to George Baird, a young man who started here in my office seven years ago. He came in here as a DP3 in August 1967, fresh out of the programmer's school, then at Bainbridge, now at San Diego, and worked with us until he completed his enlistment." At that time, Baird became a federal employee, remained in the computer field, and today holds a GS-14 position.

Among the many vivid qualities which make up "the little old lady" in the Pentagon is a very pronounced and modern-day tendency to "tell it as it is," or at least the way she sees it. When asked her feelings about Navy women today and their efforts to get into all facets of Navy life, she began, "Well, you know, a lot of people have forgotten something. They've forgotten World War II. The Navy was the last to have women in the service. Now there's good reason for that. Historically, there's a tradition that women and black cats aboard ship are bad luck and that is probably true.

"Although the Navy was the last to accept women, when it did, it went all the way. And if you'll notice, our uniforms have always been the same as the men's uniforms. They don't look different like they do in the other services. When they accepted us, they accepted us completely.

"So, from day one in World War II, we were into everything, except going overseas, which Congress did not permit at that time. We were given every opportunity. It was in the peacetime years in between, when there were not as many billets and the money was cut back, in '45 and '46, that the WAVES dropped back. And we're again in the same kind of period.

"To me, it feels just exactly like 1946 did. We're cutting back numbers of people, promotions and budgets, not that we're actually cutting budgets, but inflation is cutting them for us. So you've got the same thing happening.

"Now from my point of view, since I started back there in the beginning, I think it's the competition for promotions, for command and a stringent budget that make the girls feel like they're not getting as many chances, but I think they are. They're getting more chances in the Navy than they would in the outside world, and I've been out there too.

"As far as I'm concerned, I'm content. I think the Navy has done right by us.

"Now there are some of them pushing for command and that sort of thing, I guess, but I think until we have women brought up in a tradition of command, they're not ready for it. There's no tradition of women commanding things yet. There have to be several generations until the girls 'grow up' in the environment. I'm not sure we're ready for it."

CAPT Hopper thinks the chief mistake made thus far in development of the computer was the creation of a mystique around what "is just another tool, although the greatest tool." She commented, "We were so busy in the early days that we didn't take time to explain and a bad habit has turned into accepted practice." She continued, "It's the darnedest thing in the computer industry. You never know what it's going to do next. In just 30 years, we've gone from a $3 million computer to a $360 computer that has one thousand times the capacity."

When asked about changes or advancements coming in the computer industry, she remarked, "I think the biggest things are the mini- and micro-computers. They're going to change the whole way we run and operate computers, the way we train people, the things we can do and everything else."

She went on to explain that connections on a micro computer are so narrow that they are not measured in fractions of an inch, but in the number of atoms wide. She also said that micro-computers are already aboard ship. One aboard USS *Little Rock* processes the captain's messages.

In one of her many speaking engagements, CAPT Hopper closed by saying that she wanted to live until 1 Jan 2000.

"I have two reasons. The first is that the party on 31 Dec 1999, will be a New Year's Eve party to end all New Year's Eve parties. The second is that I want to point back to the early days of the computer and say to all the doubters, 'See? We told you the computer could do all that!' "

—Story by JO1 Ken Testorff
—Photos by PH1 Richard Pendergist

from the desk of the

Master Chief Petty Officer of the Navy

Master Chief Petty Officer of the Navy John D. Whittet. Photo by PH1 Bert Wendell, Jr.

'Duty at Sea'

The Navy is more than ships at sea. But then again, we must never forget that the strength of the Navy lies in its ships, and ships must go to sea.

Sea duty, by its very nature, makes the Navy unique among the armed services. Only the Navy adds the requirement for extended periods at sea to the normal rigors of military life—and that requirement exists during peacetime as well as in time of war.

The mission of the Navy of the 1970s is dramatically different from what it was 199 years ago at our country's birth. No longer must we concern ourselves only with defending our shores or with isolated confrontations between our forces afloat and those of enemy fleets. Instead, we plan in terms of global strength. As a maritime nation, control of sea-lanes for commerce and communication is an absolute necessity. Without this assurance, the free flow of the materials needed to support our nation and the ability to supply our overseas military forces would be greatly endangered.

During a recent trip to the Panama Canal Zone, as I watched the multitude of vessels transit the canal, I was visually reminded of America's dependence on the sea. In order to maintain our balance of trade, we must be able to import and export goods and services to and from other nations. Therefore, in addition to national defense, one of the primary concerns of our Navy is to maintain free access to the seas to carry on this vital commerce.

In order to meet these challenges, the majority of naval personnel must, naturally, go to sea. At this time, approximately 60 per cent of the Navy's distributable personnel assets are assigned to sea duty billets.

Each of us connected with the Navy can probably remember the first time we visited and talked with a Navy recruiter. We gave full attention as the recruiter gave us the facts, as well as a few "sea stories" to whet our appetities for travel to foreign shores. If you were anything like me, you went home that night armed with Navy literature and dreaming of "salty" adventures and travel to faraway places. After all, didn't we all join the Navy to see the world?

No matter whether one joined the Navy in 1775 to serve against the Royal Navy or just three weeks ago, the desire for travel and adventure has remained the same. For many people, going to sea is one of the greatest opportunities for high adventure and escape from the routines of shorebound living. While no Navy member likes to leave his family and friends who must remain ashore, the need to serve and participate in our national defense must be accepted.

But, as one young seaman once told me, "Going to sea ain't exactly a piece of cake." Running a ship is a 24-hour-a-day, seven-days-a-week endeavor involving every man aboard, from the commanding officer to the most junior seaman apprentice. When aboard ship, the American sailor may spend up to 60 hours every week in watchstanding duties alone, but watchstanding is only one part of a sailor's duty. When not on watch, the shipboard sailor is engaged in the maintenance, repair, and overhaul of equipment, as well as the performance of required housekeeping. With Navywide fleet manning averaging only 95 per cent, it comes as no surprise that almost half of our Navy spends more than 80 hours a week in some facet of assigned duty.

Besides this "normal" workweek, there are periodic all hands evolutions—general quarters, drill, shipboard training, combat readiness exercises, and underway replenishments. Everyone aboard plays an important role in these vital operations which add long, hard hours to the sailor's already arduous schedule.

Unless you have felt the relentless pounding of the heavy sea and the constant roll and pitch of the deck beneath your feet, the real effect of sea duty is lost. A few days of heavy weather are usually more than enough to satisfy the venturesome spirit of even the hardiest of mariners. Turbulent sea, steaming summers and frozen winters can make life aboard a ship both hazardous and physically exhausting.

No description of shipboard life would be complete without mention of the family separation involved. Not only must a sailor face periods of necessary separation from family and friends, but he must also endure long days of work with nowhere to go to "get away from it all." Even under optimum conditions, working and living conditions aboard ship can only be described as cramped, but adequate. For a man at sea, the shipboard environment is with him around the clock. Life on the high sea offers "no place to hide."

Despite these conditions, duty at sea is a sailor's way of life. We in the Navy must never forget that we can best practice and perfect our profession at sea. Sometimes we unintentionally dwell on the adverse aspects of sea duty while forgetting that the lure of travel to historical and exciting countries is a definite compensation. Anyone who has proudly stood at quarters when entering a new port after a busy underway period can testify to this fact.

Much can be said also about the teamwork and camaraderie developed under adverse conditions. After a long and difficult deployment, the feeling of a job well done has helped to change many young sailors into professionals. The operational experience and expertise gained at sea are invaluable to these personnel during fleetwide examinations, and sea experience has proved to be a valuable asset during selection board proceedings. And, when it comes right down to it, many find going to sea to be just plain fun!

I have witnessed with much pride the important changes in attitude toward sea duty which have been taking place in recent years. Because of this change, many aspects of life at sea have been steadily improving.

The continuing modernization of our ships has brought improved habitability. Practically every vessel is now air-conditioned for improved personal comfort. There is also a concerted effort to improve sleeping, stowage, and head facilities in order to provide more room and just a little more privacy. Messing areas are also showing steady signs of improvement and modernization.

Another important change during recent years has been the development of overseas homeporting. While this program met with some initial difficulties, I firmly believe that this forward deployment program is now accomplishing its original goal and allowing Navy families to spend more time together outside of the continental United States. Travel has always been one of the Navy's greatest benefits. Today's Navy men and women, as well as their dependents, are now able to travel to and live in more places around the world than ever before. Travel and adventure are still a part of our modern Navy.

Changes have also taken place in the amount of time a sailor spends at sea. Sea duty tours have been shortened in many cases, as have deployment lengths. In addition, more ships are now able to go "cold iron" upon return to port, thus making standdown periods longer for most commands.

The recent inception of sea points for advancement, while controversial, is another move in the right direction. Sea points for those members eligible puts emphasis where it should be—on arduous sea duty. Since the Navy is a sea service, advancement opportunities should be enhanced for those members who have been deployed on arduous sea duty. While shore assignments and neutral duty remain vital to the Navy's mission, we must never forget that these types of duty function primarily to support and maintain our forces at sea. Obviously, without sailors and ships at sea we would have no Navy.

I encourage each and every Navy member to examine his attitudes toward sea duty. Life at sea will never be devoid of hardships, but it will remain our profession and the focus of our mission. Therefore, it should be approached positively. After all, sea duty is what the Navy is all about!

- NEW PLAN WILL SPEED UP ADVANCEMENT EXAM RESULTS FOR MANY

Navy people from the last two advancement exam cycles have had the results withheld because their current evaluation did not appear on the enlisted master computer tape in BuPers. Starting with the August 1975 exam, Fleet activities will compute the performance mark averages and include them on the person's examination answer sheet. This will make it possible for candidates to receive prompt notification of exam results. Exact procedures will be given in a forthcoming BuPers Notice.

- NESEP APPLICATIONS BEING TAKEN: ELIGIBILITY REQUIREMENTS CHANGE

Applications for the 1976 Navy Enlisted Scientific Education Program (NESEP) are now being taken and are due at BuPers by 1 Nov 1975. However, commands and applicants are reminded that a major eligibility requirement change will make it necessary to begin preparing NESEP requests soon. All candidates must now complete a College Entrance Examination Board Scholastic Aptitude Test (SAT) administered by the Naval Education and Training Program Development Center--even if they have taken a SAT elsewhere before. SATs must be ordered by commands between 15 May and 1 June and shall be administered on the third Monday in July. There will be no alternate SATs or exam dates. This and other NESEP changes, along with application requirements and procedures were announced earlier in BuPers Notice 1530 of 19 Mar 1975.

- SHORTER SEA TOURS FOR SOME ENGINEERING RATINGS ANNOUNCED

The Chief of Naval Personnel recently approved a three to six-month shorter sea tour for several engineering ratings. This is the first reduction in sea tour lengths for engineering personnel since 1973 when the maximum was set at 60 months. Further cuts in maximum sea tours for all pay grades can be expected as petty officer manning improves, according to BuPers. Engineering rating shore tour lengths will not change. The revised tour lengths are: BR (E7-9), 57 months; BT (E7-9), 57 months; EM (all), 54 months; HT (E7-9), 57 months; IM (E7-8), 54 months; ML (E7-8), 57 months; MM (E7-9), 57 months; MR (E7-9), 39 months; OM (E7-8), 57 months and PM (E7), 57 months.

These revised sea tours will be effective on 1 Jul 1975, except for EMs whose sea tour reduction will be phased in between July 1975 and July 1976. Those affected by the change who are currently on sea duty and have a projected rotation date (PRD) in August 1975 or later, will have their PRD adjusted by the indicated amount of sea tour reduction (except that the new PRD will not be earlier than July 1975). EMs having PRDs in the early part of the phase-in will have their PRD adjusted by one to three months, while those in the latter stage will have an adjustment made of four to six months.

- ENLISTMENT BONUS PROGRAM CANCELED FOR REMAINDER OF FY 75

In case you didn't get the word, payment of enlistment bonuses was discontinued for the rest of fiscal year 1975 (which ends 30 June 1975). The program was designed to stimulate enlistments in specific ratings that had not met recruiting goals, and was being paid to new recruits in the EW, GMM, MN, TM, CTI, CTR and CTT ratings after successful completion of "A" school. Prior service personnel in eligible ratings who did not require "A" school were also eligible and received the bonus upon assignment to their first duty station after reentering the Navy. According to BuPers, the decision to cancel the program is based on the present success in meeting recruiting quantity and quality goals.

- OFFICER SPOT PROMOTIONS RENEWED ON LIMITED BASIS

The Secretary of the Navy has announced a renewal, on a limited basis, of the temporary spot promotion program for certain officers. It will apply to those with critical skills serving as engineer officers or their principal assistants, afloat staff material officers and other staff engineering officers who directly support Fleet engineering readiness. To be eligible, an officer must have two years in the grade of lieutenant and be serving in a lieutenant commander billet. In most cases, a three-month evaluation period must be served in the billet, and a minimum of one year remaining in the billet is required. Spot promotions will be made through a selection board, probably on a quarterly basis. Specific criteria, instructions for administering the program and a list of qualifying billets will be contained in forthcoming Secnav and OpNav instructions.

- NEW MCPON SELECTION GOES TO THE BOARD

Approximately 100 service records of Master Chief Petty Officer of the Navy candidates have gone to the E-8/E-9 Selection Board which recently convened. This board will select the 10 best qualified. At a later date another board will be convened, headed by a flag officer, and it will pick the top four candidates from the 10 best qualified. Final selection from these top candidates chosen by the board will be made by the CNO and is expected by late May. The new Master Chief Petty Officer of the Navy is scheduled to report for duty at BuPers on 1 August and to relieve MCPON J. D. Whittet on 1 September.

- SHORE DUTY BILLET LIST TO BE PUBLISHED ONCE A YEAR

The "shopping list" of shore billets, BuPers Notice 1306, will now be published annually, rather than semiannually as in the past. (See ALL HANDS, Feb 1975, p. 39.) This change is due to a significant rise in printing costs, and the slight variation in individual billet locations within a six-month period. The annual notice will be issued in August of each year. Commands are asked to retain the most recently published shore duty billet listing (16 Jul 1974) and change its cancellation date from February 1975 to August 1975.

- NAME SELECTED FOR NEW PATROL FRIGATE

Lead ship of the Navy's first class of patrol frigates, PF 109 (soon to become FFG 109) will be named for Oliver Hazard Perry, the American Naval hero of the War of 1812. Five former naval ships named in honor of Commodore Perry include a fast brig, a side-wheel steamer and destroyers DD 11, DD 340 and DD 844. Start of construction ceremony for PF 109, the first of about 50 in the Perry class, was recently held at Bath, ME. These ships will be capable of ASW, AAW and surface strike operations primarily in support of convoys and amphibious operations.

• NAVY UNIFORM CHANGES ARE ANNOUNCED IN NEW NAVOP

As ALL HANDS went to press, NavOp 56 announced recent uniform decisions in advance of the forthcoming revision to Navy Uniform Regulations. The decisions are a result of an extensive examination of existing and proposed uniforms and reflect the strong desires of the Chief of Naval Operations to achieve uniformity and reduce the number of uniforms and accoutrements that an individual is required to maintain. Reduction of numbers of uniforms will not only permit reduced expenditures to the individual, but will provide some relief to shipboard stowage problems.

Specific guidance is given as to how uniforms are authorized for wear; for example, what the specific uniform should be used for and how it should be worn. Further guidance will be forthcoming to commandants and area commanders restricting options in prescribing uniform-of-the-day policy. The new uniform regulations will include a sample uniform-of-the-day plan to assist in achieving greater uniformity in specific locations with standardization in format to provide easy reference and eliminate confusion for transient personnel.

Prescribing authorities are expected to select uniforms (dress and work) with due regard to climatic conditions, command function and public exposure. Uniform selections are to be at the discretion of district commandants instead of the individual member. The following decisions on male uniforms are affirmed:

- Service Dress Blue is designated as the basic all-year-round uniform for all officers and enlisted personnel.
- Introduction of a short-sleeve convertible-collar white shirt is approved to replace long-sleeve dress and tropical white shirts and become standard issue for the seabag when stocks of those shirts are exhausted (about October 1976). The wearing of long-sleeve white shirts with service dress blue uniforms will remain optional.
- Winter Working Blue is approved as a required working uniform for all officers and enlisted men. It is composed of the long-sleeve blue shirt, service dress blue trousers, black belt, shoes and socks and combination cap. Available in several fabrics through exchange uniform shops, issue of a wool flannel shirt will commence for recruits during fiscal year '76, and the uniform will be required for all by 1 Jul 1976. It is authorized--

1. For wear with tie; or without tie, as prescribed.
2. For wear with blue working jacket (only aboard duty station), or peacoat, reefer and raincoat. Wear with the service dress blue coat is not authorized.
3. For wear to and from work when in home port or permanent duty station, when specified.
4. For wear with breast insignia/badges. Wearing of ribbons is not authorized.

- Tropical Khaki Long is deleted as a dress uniform for all officers and CPOs as of 1 Jul 1975. The uniform, consisting of short-sleeve khaki shirt, khaki trousers and belt, combination cap or fore and aft cap, will be retained as Working Khaki and is authorized--

1. For wear with worsted or double knit or wash-and-wear (permapress) trousers or (with due regard for appearance and neatness standards) "wash" cotton trousers.
2. For wear with the optional khaki jacket. Wear with the blue working jacket is not authorized.
3. For wear to and from work while in home port or at permanent duty stations (note caution regarding "wash" trousers).
4. For wear with breast insignia/badges. Wearing of ribbons is not authorized.

- Brown shoes will be deleted as an authorized uniform item, effective 1 Jul 1976. Black shoes and socks may now be prescribed for wear with khaki uniforms and the optional aviation green uniform.
- The long-sleeve khaki shirt will be an authorized uniform item only when worn with the optional aviation green uniform after 1 Jul 1975.
- Full Dress White is retained as a uniform for all officers. Enlisted personnel will wear Tropical White Long at ceremonies that require the wearing of full dress white uniform by officers. Service dress white for officers will no longer be prescribed.
- Summer Blue is approved for all enlisted personnel, commencing 1 Jul 1975, as an authorized summer dress uniform. The uniform consists of the tropical white shirt (or convertible-collar white shirt), ribbons and breast insignia, combination cap, service dress blue trousers, black belt, shoes and socks. It will be worn with rating badges for E-1 - E-6 and collar devices for E-7 - E-9.
- Tropical white long will be retained, but shall be worn only when specified by district commandants as a uniform of the day in areas where climate clearly dictates, or prescribed for ceremonial occasions.

- Dungarees -- in order to provide a smart looking, durable shirt and trouser working uniform, introduction of a flare-legged dungaree trouser and chambray style shirt has been directed. This uniform will be phased in as stocks of present blue working uniforms are depleted. Constructed of "easy care" fabrics, the new uniform will closely approximate the presently optional "dungarees" sold through Navy exchanges.

- A new lightweight blue coverall has been approved as organizational issue gear for surface ships and as a replacement for the present Polaris submarine coverall. It is anticipated that the new coverall will be available in the supply system by 1 Jul 1976.

- A review of current uniforms authorized for women officers and enlisted has been conducted. Several changes have been proposed, including a new four-piece interchangeable ensemble as replacement for the light blue summer uniform. Results of this review will be promulgated at a later date.

Here's Advice from an Expert:

WHAT DO YOU WANT TO KNOW ABOUT LIFE INSURANCE?

Editor's note:

Before enlisting in the Navy, the writer, JO2 Dan Wheeler, was a special agent (salesman) for a major life insurance company operating out of Milwaukee, Wisconsin. He completed two parts of the Chartered Life Underwriter's Exam (CLU) and put several million dollars of personal life insurance in force. The majority of his clients were doctors, lawyers, and other young professional men.

During his three years as an underwriter, he completed company-offered courses in estate planning and insurance usages, worked closely with trust officers in setting up life insurance trusts, and completed a 300-level college course in insurance.

Over 95 per cent of Navy men and women are insured for at least $5000 of life insurance through Servicemen's Group Life Insurance (SGLI) and many own additional

policies through commercial life insurance companies.

Navy people share with their civilian counterparts the distinction of owning more life insurance by far than citizens of any other country. Yet many Navy people—not unlike millions of other Americans—know surprisingly little about the provisions of their policies.

They possess no more than a general knowledge about the usefulness of life insurance in personal financial planning.

Some erroneously believe its only usage is indemnification of one's family in case of premature death. If this were so, it could be called "death insurance," not life insurance.

Because of ignorance about the life insurance contract, many Navy people purchase insurance on the spur of the moment without forethought and without knowledge of the actual long-term cost or the living benefits which could be derived. Lack of basic knowledge causes policyowners and prospective buyers to ask such questions as:

- Can life insurance benefit me while I am alive?
- How much coverage is enough?
- Does my agent do anything for me except sell the policy?
- How come some policies pay dividends and some don't?
- What does insurance actually cost me?
- Why are there so many types of policies?
- Is insurance an investment?

Only your life insurance agent can answer specific questions about your own personal situation. The purpose of this article is to answer some frequently asked questions and provide basic information needed to make an intelligent life insurance purchase. The following are some frequently asked questions and their answers:

- What is the difference between stock insurance and mutual insurance companies?

A stock insurance company is one owned by its stockholders. Some stockholders may be policyowners but it is not required. The stock company issues "non-participating" policies and calculates premiums as closely as possible to concur with the actual annual cost of the insurance.

Because of medical breakthroughs, mortality rates are decreasing annually and due to inflation, in part, investment returns are increasing so the insurance company usually realizes a profit at the end of the year. The policyowners receive no rebate and any profit is distributed to the stockholders in the form of declared dividends.

A mutual insurance company, on the other hand, is owned by its policyowners; there are no stockholders. Each policyowner owns a portion of the company. His share is determined by the percentage his insurance is to that of the total number of policies in force. Mutual companies issue "participating" policies and calculate premiums which include an extra margin for unforeseen contingencies. At the end of the year, the company calculates the actual cost of the insurance outstanding and declares a dividend to its policyowners. Life insurance dividends are treated as refunds of excess premiums for tax purposes, not as earnings. Life insurance companies are required by law to maintain adequate reserves to cover liabilities. A policyowner can never be held accountable for company liabilities.

Although premiums for participating policies are somewhat higher initially, many life insurance experts contend the actual cost of the policy in force over the normal time is less than the non-participating policy. This, allegedly, is because profits are distributed to policyowners instead of stockholders.

- How can I figure the actual cost of my life insurance?

The actual cost of your life insurance is dependent upon three factors: mortality experience of the company, investment return of the company, and the company's business expenses.

A company that carefully screens its prospective policyowners in order to eliminate as many bad health and occupational risks as possible (or charges an additional premium for coverage); realizes a good return on its investments; and keeps its operating expenses to a minimum without eliminating essential services will be able to offer low-cost life insurance. Company standards regulating these cost factors vary from company to company and, consequently, there is a difference in actual cost for insurance.

Correct procedure for calculating actual cost to policyowners has been argued among actuaries, brokers and agents for years. Many believe that factors other than premium, cash value and dividends must be considered. One factor is investment potential elsewhere of premium dollars, or investment of the difference in the premiums charged.

One of the leading and most respected life insurance publications uses a method to determine net cost that is simple in concept and generally accepted as reliable concerning quick calculations for comparison purposes. To figure cost—multiply the annual premium by the number of years the policy has been in force. The resultant figure is gross premium. For the gross premium subtract any dividends paid as refunds—either in the form of premium reduction or in cash—the resultant figure is net premium. Subtract net premium from policy cash value accrued—the resultant figure is net cost for the number of years the insurance has been in force.

In many instances, participating policies show a plus cost (gain) between the 10th and 15th year and thereafter. Non-participating policies show a gain much closer to the policy's maturation date.

This guide for calculating costs is not intended to encourage policyowners to drop currently held insurance in favor of some other insurance that predicts a lower annual cost. There are great risks and costs in doing so and the law requires that you file a statement declaring that you understand those risks before it will allow a company to issue replacement insurance.

Consult your agent before even considering dropping one policy already in force in favor of another.

- Why are there so many types of policies?

In most instances, one type of policy alone is insufficient to fulfill economically every insurance need. A good agent tailors an individual's insurance program to fit all his needs.

Often this means the purchase of more than one policy, among them: term insurance to cover short-term needs like mortgage protection; endowment insurance to accumulate money for college education for dependents (see Endowment Insurance, page 46); whole life insurance to provide lifelong protection and safeguard the estate and widow's welfare at death of the insured; limited payment life policies to provide money for retirement or to accumulate money in peak earning years.

Insurance companies may glamorize their policies with many sophisticated or complicated-sounding names. They may combine several types of policies into one contract and it sounds like a miracle policy. But, they are all made up of one of two major types of life insurance—term or permanent, or a combination of both.

Term insurance provides protection for a predetermined number of years, usually one to 30. It is adequate for protection needed on a short-term basis such as when a contractor's creditors insure him until some major development is complete. They do this to protect their financial investment which could be lost if the contractor were to die before completing a project.

Term insurance is pure expense in that it accrues no cash value although it may pay dividends annually. No matter how long it is kept in force, pure term insurance yields no surrender value. Because of high net cost and lack of guarantee that it may be renewed until death, it is not recommended as a replacement for permanent life insurance. It is only a temporary supplement to your insurance program and it is not meant to be a substitute for permanent insurance.

Permanent life insurance is "term for life no matter how long you live." It never needs to be renewed. No matter how your health may change, the company cannot cancel this coverage. It builds cash value and is therefore considered an asset. It earns interest and is therefore an investment.

Permanent insurance is divided into three broad categories: whole life; limited payment life; and endowment.

Whole life (also called ordinary or straight life) is the basis for all permanent insurance and is the most widely used. According to contract, the insured pays premiums until he is 90 years of age. At that time, it is paid in full and premium payments are no longer required. The insured may stop paying premiums at any time and accept a paid-up policy for a lesser amount than the face amount of the contract as most people do when they are approaching retirement age.

Whole life is perhaps the most flexible of all insurance policies. It can fulfill accumulation needs for college expenses or provide retirement cash in the form of an annuity or any number of other optional uses. Your agent can inform you of specific uses as they fit into your insurance plans.

Limited payment life is similar to whole life except the payments are paid at an accelerated level and are completed in a predetermined number of years, usually one to 20. However, "65-life policies" fall in this broad category. Because the premiums are paid at an accelerated rate they are higher, but the accumulation of cash value is more rapid.

If maximum protection is your goal, then limited payment life is not for you. It is designed to provide maximum investment return and greatest accumulation in the shortest number of years. At the same time, it provides lifetime insurance protection.

Endowment insurance is just another form of limited payment life, with one important difference—when this policy matures, all protection ceases and the insured is paid the face value of the policy. It is a kind of insured savings plan. A specific accumulation goal is selected and the number of years to reach that goal is selected. The accumulation goal becomes the face value of the policy. Biggest advantage of the policy is—if the insured lives the designated number of years, the face amount is paid directly to him; if he dies before he has time to accumulate the selected amount, it is paid to whomever he designated. People usually purchase endowment policies with specific purposes in mind like college education fund, investment nest egg, retirement fund, etc. Its greatest appeal is the semicompulsory savings feature and the guaranteed accumulation of a certain amount of money in a predetermined number of years.

- What are policy options?

Policy options are extras added to an insurance policy at additional cost to indemnify against possible contingencies other than death by natural means. Settlement options are ways to distribute proceeds and are not extras.

Three popular and valuable options are: disability waiver of premium, guaranteed insurability option, and accidental death benefit.

The disability waiver of premium states that if the insured becomes disabled, the company will waive any further premiums as long as the disability exists. What constitutes disability varies from company to company, but it generally means inability to seek gainful employment due to severe disability. In many companies this disability cannot be self-inflicted. When the disability waiver is put into effect, the insured loses no policy rights. He is still the owner and maintains full control over all policy options including the right to borrow, change beneficiaries, assign collateral and select settlement options.

The guaranteed insurability option makes it possible for policyowners who become uninsurable, or insurable at higher than standard rates, to purchase additional insurance at specified future dates. The option is beneficial in that anyone who has this rider attached can purchase up to a predetermined amount of additional insurance regardless of health or occupation. The life insurance policy insures your life while the insurability option guarantees that your life is insurable. The option is exercised only if the insured finds he cannot purchase insurance at standard rates. The option does not limit the amount of insurance that can be purchased if you are otherwise insurable.

Additional death benefit pays an amount equal to the benefit face value to a beneficiary if the insured dies from accidental means or accidental bodily injury. (There is a subtle difference in "means" and "bodily injury" in insurance parlance. This should be explained by your agent.) The accidental death benefit should not be used to replace coverage required at all times since no one, of course, knows by what means he will die. There are few instances where this benefit is justified in good insurance planning but, nevertheless, it remains popular.

- How much insurance is enough?

The amount of life insurance that is enough depends solely on what are your goals. One must evaluate his own priorities since everyone's goals for themselves and their families are different. Some things to consider when trying to determine the correct amount of coverage are:

- An emergency fund is usually needed for the transitional period immediately following death. There are everyday expenses to be paid until insurance proceeds are paid and the estate is settled.
- Money to pay for mortgage on home (see Mortgage Insurance, page 47) or provide money to purchase home is sometimes desirable.
- Money to provide an educational fund to send children to college or trade school.
- Burial expenses.
- Expenses of last illness.
- Money to pay outstanding debts.
- Money to pay estate and income taxes, where applicable.
- Money to provide capital sufficient to produce enough income for family support.

This area of exactly how much coverage is enough is a variable and should be thoroughly discussed and thought out with a life insurance agent, trust officer, broker, and lawyer. They will help you coordinate all your assets and government benefits into a workable estate plan. These services are important to an individual regardless of income or net worth.

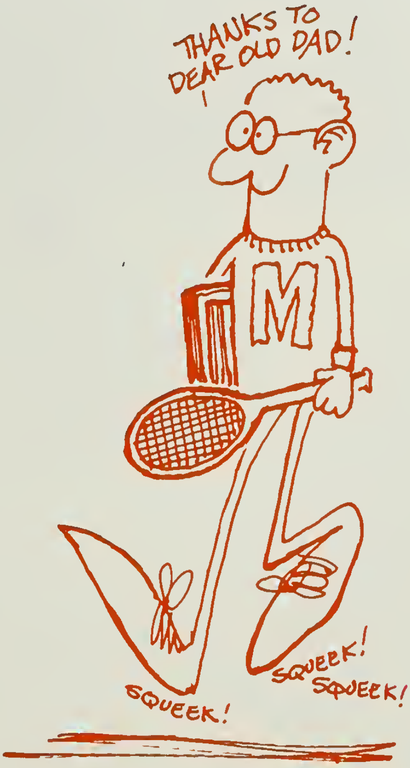
- What does an agent do besides sell the policy?

Most accredited life insurance agents are highly trained professionals who spend many hours studying developments in the insurance and estate planning fields. The sale of a policy is just the beginning of an agent's services to his clients.

The professional agent spends the time necessary to help you define your own protection and financial goals. He must ask many questions concerning your financial arrangements. Armed with this information, he recommends you to trust officers to discuss the advisability of life insurance and other types of trusts; he encourages you to see a lawyer and will even introduce you to one if your will needs revision or trust agreements need to be drafted. He has a doctor examine you to determine if you are eligible for life insurance from a medical standpoint.

This team—lawyer, banker, life insurance agent—usually comprises your estate planning team. In instances where there are considerable assets in the form of stocks and bonds, a broker is included.

In addition to helping you determine how much coverage is needed, your agent services your policy—makes changes in beneficiaries and options as required. He keeps in touch with you and informs you of changes that may affect your insurance planning. He is your life insurance consultant as long as the policy remains


THANKS TO DEAR OLD DAD!
M
SQUEEK!
SQUEEK!
SQUEEK!

in force; your premiums purchase his knowledge, experience and services. Don't hesitate to call on him for advice or explanations.

- Is life insurance a good investment?

A life insurance adage says, "A person will never get rich by buying life insurance, but he will never be poor either." Life insurance is a fixed-dollar investment. Other fixed-dollar investments are savings accounts and savings bonds. These types of investments are not speculative and are guaranteed. They are low-risk investments.

Life insurance has formed the foundation of the investments portfolios of many successful businessmen throughout the years because:

- It guarantees you will be able to meet your family's security needs whether you live, die or become disabled. It guarantees that if you run out of time, you will still be judged successful.
- It provides tax-exempt growth through cash values and dividends.
- Its proceeds are nontaxable when paid to a beneficiary.
- It provides a fund from which money can be borrowed regardless of economic conditions.
- Cash values can be used as collateral for bank loans.
- It eliminates the need for credit life insurance on time purchases.
- It guarantees that even if all other investments fail, there will be money available for retirement.
- It guarantees an income for dependents in the event of the insured's premature death.
- It affords peace of mind because future needs are provided for and that makes correct decisions easier to make as regard other investments.

Yes, life insurance is an investment—an investment that is an excellent foundation for any investment portfolio.

Life insurance is an investment for the person who plans to be wealthy because it provides liquidity in his estate and prevents liquidation of assets at an inopportune time to pay estate taxes and provide income.

Life insurance is an investment for the average person who needs the guarantees of income for his dependents if he dies and income for himself if he lives.

It is an investment that stretches over a lifetime and should not be purchased without considerable forethought and the specialized knowledge of a competent agent. The motto of the Better Business Bureau is perhaps apropos—"Before you invest—investigate." You won't be sorry.

Endowment Insurance

Endowment life insurance is one method of saving for your dependents' college education. It has two major advantages over a savings account or savings bonds: you are constantly reminded to save the desired amount year after year because the insurance company continues to send premium notices, and even if the saver dies before the policy matures, the full amount is paid.

Endowment insurance is a life policy that remains in force for a predetermined number of years. The face amount is determined by how much money will be needed to meet the need, in this case college education. The investment return is higher than on a whole life policy because the premiums are higher than they would be on a comparable whole life policy. In endowment insurance the emphasis is on savings, not on protection.

The only option usually recommended is the disability waiver of premium. It guarantees if the insured becomes disabled, the insurance company will continue the premium payments so the desired sum will be accumulated.

Although some parents insure their children with endowment insurance to provide an education fund, it is not recommended.

If the breadwinner should die, premium payments on a juvenile policy may become so burdensome the policy would have to be lapsed. For this reason, the breadwinner should be the insured.

Endowment insurance is an excellent savings vehicle, but the premiums are considerably higher than would be on some other type of permanent policy. One disadvantage of this type of insurance is that the policy must be surrendered for cash at maturation and, sometimes, much needed protection is forfeited.

Before purchasing an endowment, consult your life insurance agent to determine if it is the best vehicle for meeting your objectives.

Mortgage Insurance

Unlike certain types of casualty insurance which protect a homeowner from severe financial loss if his home or its contents are damaged by fire, flood or wind, mortgage insurance doesn't insure the home or its contents; it insures the life of the mortgage borrower. Mortgage insurance is any type of life insurance whose proceeds have been earmarked to retire a home mortgage if the borrower dies before the loan is paid in full.

Most people purchasing mortgage insurance buy decreasing term life insurance because of its low monthly price. Decreasing term is so called because its value at any given time parallels the steadily decreasing mortgage balance. Like all types of term insurance, the protection is only temporary and it ceases when the mortgage is paid in full.

DO NOT DISTURB RETIRED!

Even though premiums are paid for the duration of the debt, the insurance accrues no cash or surrender value. The premiums are pure cost to the insured.

There are other ways to insure a mortgage which require a higher annual outlay but are less expensive in the long run. One is purchasing a new permanent life insurance policy specifically for mortgage retirement or allocating a portion of existing life insurance. Since most people are underinsured, purchasing additional insurance is usually feasible.

There are two major disadvantages to insuring a mortgage with permanent insurance: The annual outlay is approximately five times as much as term, and if the insured dies during the mortgage period, the cost of mortgage protection is greater than it would have been with term insurance.

To offset these disadvantages, there are several advantages.

For a healthy man age 30, decreasing term for 30 years costs approximately $110 per year for a $30,000 mortgage policy. Permanent insurance costs approximately $375 for nonparticipating and approximately $575 for participating. If a family is financially able to afford the permanent coverage, they benefit because:

- As mortgage payments are made, the protection doesn't decrease. This, in effect, adds more protection annually that could be used for family income if the borrower dies.
- The permanent coverage is constantly building cash value that can be used for emergency loans or an education fund.
- At the end of the mortgage period, the nonparticipating insurance policy will have a cash value about equal to the total premiums paid, making the cost of mortgage protection nothing. The participating policy (if dividends are left to purchase paid-up additions) will have a cash value of about $7000 more than the premiums paid.
- The permanent mortgage insurance can be continued and used as a retirement supplement or additional insurance to pay estate taxes.
- The insured can elect to take a paid-up policy for an amount slightly less than the face amount and not pay any more premiums after the mortgage is paid.
- The insured can pay off the mortgage earlier, perhaps as much as 10 to 15 years earlier, and thereby save interest and free earned income for other purposes. This is effected by keeping close track of the policy's cash value and, when it approximates the mortgage balance, surrender the insurance for its cash value and pay the mortgage. Another way to retire the mortgage early is to borrow the cash value from the policy at the low policy rate (about six per cent simple interest) and pay the high interest mortgage loan.

There are many ways of making your personal life insurance work for you. Your agent is there to help you find them.

—JO2 Dan Wheeler, USN

An ALL HANDS Information Roundup

IMMIGRATION & NATURALIZATION

The Laws and Regulations That Apply to Navy Dependents Who Are Not US Citizens

Navymen have a habit of meeting and marrying the girls of other lands.* As a result, questions often crop up about their alien spouses' rights and obligations. We can't tell you how to meet the girl of your dreams, or how to persuade her that she should become your wife, but we can help guide you through the maze of legal questions you will run into before and after the wedding.

First, since your wife will sooner or later want to accompany you to the States, she must meet certain established standards. With some exceptions, for example, aliens who are not mentally sound or physically fit cannot enter the United States. Drug addicts, chronic alcoholics and persons with a criminal record are also barred from entry. Aliens must also be able to read and understand a language or dialect.

Nor are aliens permitted to enter the country if they are or have ever been members of, or affiliated with, organizations which advocate or teach the overthrow, by force or violence or other unconstitutional means, of the Government of the United States or of all constitutional forms of law. Those who advocate the doctrines of world communism or the establishment of totalitarian dictatorship, or whose activities after entry would be prejudicial to the public interest or would endanger the welfare or security of the United States are also excluded from entry.

Exceptions in these cases may be made if membership or affiliation was involuntary, if the person was under 16 years old, or if it was necessary to join by law or in order to obtain employment, food rations or other essentials of living.

So much for those who can't enter the country. Most Navy men wouldn't attempt to marry "that" kind of girl anyway, but unfortunately, some do; quite often it's a lonely young sailor far away from home. If his shipmates can't talk him out of his impending mistake, there are U. S. laws and Navy regulations which may at least make him stop and think.

Before You Marry

If you are overseas and meet a girl from some foreign land you'd like to take home as your wife, you must first notify the Navy in accordance with military regulations. The Navy isn't trying to discourage you, or tell you whom you can or can't marry, it's simply trying to protect you from marrying a person only to find out later that she can't accompany you to the States when you're transferred. In fact, Navy regulations and procedures are much the same as those of the U. S. Immigration and Naturalization Service (I&NS) in checking the background of *any* foreigner seeking entry to the United States.

Regulations (BuPers Manual 6210160, to be exact) require you and your fiancee to undergo a medical examination, marriage counseling, show evidence of financial ability to prevent her from becoming a public burden, and obtain written permission of parents if either you or she is under 21 years old. A background investigation of your fiancee (a requirement of the I&NS) is the most time-consuming element of the premarital process; it can take as long as three months. When you ask for an application for permission to marry, give the personnel office your girl's full name and address and ask that a background investigation, including a criminal and subversive record check, be initiated as soon as possible. It may save time in the long run.

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* *Navy women, of course, meet and marry the men of other lands, but for the sake of simplicity we'll speak of Navy men and their wives.*

Visas, petitions and any other documents necessary for your alien wife's entry are taken care of in the request-for-marriage procedures.

In reality, the Navy can't withhold authorization for you to marry whomever you please. However, if your fiancee is ineligible for admission to the States, permission to marry will not be given until you both signify in writing that you have been counseled and advised of that fact. This means that you can go ahead, but when you're transferred back to the States, your wife will not be able to come along.

Such action also will make you ineligible to reenlist (BuPers Manual 3410150). For your own future happiness, listen to the Navy.

If you are not stationed overseas, but want your fiancee to come to the States to marry you, there also are certain procedures you must follow. These, and other immigration laws, are given in the I&NS booklet, "United States Immigration Laws, General Information," Form M-50 (Rev Feb 1972) N.

The first step on your path to the altar is to file a visa petition (Form I129f) with the nearest I&NS office on her behalf, and include any minor children she may have who will also accompany her to the States. The fee is $10. The U. S. consular officer in her native city will be notified of this petition and, ordinarily, she and her children will be issued a nonimmigrant visa (here, the term "child" means any unmarried person under 21 years old). With visa and passport in hand she can sail or fly to the States and expect to be admitted upon arrival. Incidentally, a nonimmigrant status (as opposed to immigrant status) means that she will not be counted against immigration quotas set for her country and, therefore, she cannot be denied entry to the U. S. if these quotas are filled.

Your alien fiancee's nonimmigration visa is issued solely to conclude a valid marriage to a U. S. citizen, and is good for a period of 90 days. If the marriage doesn't take place within those three months, she, and any children accompanying her, will be required to leave the U. S. promptly. No extensions or change to another nonimmigration or immigration status will be granted.

You will be notified when your fiancee's visa is approved and, at the same time, receive several forms and instructions. These are to be completed and returned to the nearest I&NS office as soon as possible following the wedding. They are the necessary paperwork to change your wife's status to that of a lawful, permanent resident. This fee is $25.

Permanent Resident Status

This is important. Permanent alien residents have *all* the rights of U. S. citizens except the right to vote and to hold certain public offices. They may participate in politics, own property, own a business, collect social security benefits and work without getting a labor certificate as other aliens must. They are, in effect, nonvoting citizens. Permanent resident status will also be an advantage later, as we shall see, if your wife wants to travel outside the U. S. Finally, your wife must have obtained this status if she decides later to become a U. S. citizen.

Once your wife's status has been changed to permanent resident she will be sent an Alien Registration Receipt Card (Form I-151). This card remains valid for as long as she remains an alien, lawfully admitted to the U. S. for permanent residence. It must be carried by her at all times and failure to do so may result in fine and imprisonment. Aliens under 14 years old are registered through their parents. Within 30 days after they reach 14, they too must register; when they reach age 18 they must also carry a registration card.

As a permanent resident, your wife must notify the I&NS of her current address each year during the month of January, and within 10 days after each change of address. These reports must be made on official forms available at any post office. If an address report cannot be filed because your wife is out of the country during the month of January, it must be done within 10 days after she reenters the States. Failure to comply may result in a fine, imprisonment or both, and, if willful, could result in deportation.

Form I-151 has replaced the old-style alien registration receipt card, Form AR-3. Any alien who still has the old form should apply for the new one at the I&NS office having jurisdiction over his geographical area.

Traveling Abroad on Leave

Sooner or later you and your wife are going to take leave and travel to the old country to visit her family. You'll have to get certain documents and follow certain procedures again, especially so that your alien wife can reenter the U. S. Listed below is information concerning these documents:

- *Passports*. You've got to have one for yourself and *every other* U. S. citizen traveling with you. A passport is primarily to identify you as a U. S. citizen while abroad and when you reenter the States. They may be obtained from a passport agency, a clerk of any federal court or state court of record, a judge or clerk of any probate court, or a postal clerk designated by the postmaster general. More than one person, your children for example, may be included in your passport if they will be accompanying you (the bearer) throughout the trip. When applying for your passport, you'll need two photos of yourself and proof of citizenship—the passport office can give you specific details on requirements. This fee is $12.

Your alien wife should already have a passport from her native land. You should check with that country's embassy or consulate to make sure it is still valid. If, for some reason, she does not have her passport, you should get one from the embassy or consulate.

- *Visas.* A visa is an endorsement, usually rubber-stamped in your passport, by a country you wish to travel in giving you permission to visit for a certain period of time. Visas are obtained from the embassy or consulate of the countries you wish to visit. Your alien wife does not require a visa from her native country, since she is still a citizen there, but she will require one from other countries you will also visit.

At present, no visas are required for brief tourists' visits to Western European countries, except those under communist control (in which you must get special permission to travel). However, it would be wise to check with each consulate of the countries you plan to visit to find out current requirements. Locations of these offices may be obtained from the Congressional Directory at most libraries or from your city telephone directory.

- *Health requirements.* Different countries require different immunizations before entry will be granted. Check with the U. S. Public Health Service, state or local health department or your medical officer to find out what you and your family will need. In any case, whatever immunizations you receive must be recorded in the yellow International Certificates of Vaccination booklet (Form PHS-731). You and each member of your family should have an up-to-date booklet as part of your medical records. If you don't, ask your medical officer for one. They're also available from state and local health departments, passport offices and even travel agencies.

- *Reentry permits.* If your stay overseas will be less than one year, your alien wife—a permanent resident—will need no documents to reenter the States other than her Form I-151. In some cases, however, the foreign country you plan to visit will require that she have a U. S. reentry permit. Check with their embassies before you go.

If she's required to have a reentry permit you must file the application at least 30 days before your departure. You'll probably have to obtain one for each alien child or adult, regardless of age. Applications for children under 14 years old may be made by a parent or guardian. The fee for each reentry permit is $10.

If your wife failed to obtain a necessary reentry permit before leaving the States, she can apply abroad at any American consulate for a "special immigrant" visa or to a U. S. Immigration Office for a waiver of immigrant visa requirements.

Traveling Abroad on Orders

Traveling overseas under official orders alters the document requirements somewhat for you and your dependents.

You, as a Navy member, normally are not required to have a passport, or any visas, for travel in the country of assigned duty. If they are necessary, your personnel office will help get them before you leave.

If you are going to do any traveling outside your country of duty, you will need a passport and, possibly, visas. They can be obtained at the nearest American embassy or consulate for the regular $12 fee.

Your alien wife will not need a passport if you are going to be stationed in her native country (she's still a citizen there) but, if you're going to be stationed in a country other than her own, she'll have to get a passport and necessary visas from her own government. Give your transportation officer your wife's passport number as soon as possible in order to avoid travel delays.

When your overseas tour ends your wife will not need any special documents in order to reenter the U. S. other than her Form I-151—if she returns with you or within four months of your transfer date and does not travel in, to or through any communist-dominated country. It might be a good idea to have a copy of your orders and her military dependent's ID card handy when you enter the States as proof of her permanent residence status and her marriage to you, to avoid possible confusion. Have your current yellow "shot book" with you at the time of reentry, too.

Citizenship and Naturalization

Your alien wife and children may want to become U. S. citizens. The procedures and other citizenship information are explained simply and completely in the I&NS booklet "Naturalization Requirements and General Information" (Form N-17). It's available at any I&NS office. The naturalization laws apply to both men and women of all races and basically require that they:

- Be at least 18 years old.
- Have been lawfully admitted to the U. S. for permanent residence.
- Reside in the States for three years (a special provision made for the spouse of a U. S. citizen) after lawful admission for permanent residence and just before filing her petition for naturalization. For 18 months of these three years (rather than the five years and 30 months for those without a citizen spouse) she must have been physically present in the U. S. There are exceptions for spouses of Armed Forces members being transferred overseas which we'll get to later.
- The citizenship candidate must be of good moral character and must believe in the principles of the Constitution of the United States. For a period of 10 years before filing her citizenship petition, she must not have been a member of the communist party or similar organization, or any others which advocate dictatorship in the U. S. or the overthrow by force of the U. S. Government.
- She must never have broken the immigration laws of the U. S. and, as a result, have been deported.
- She must be able to speak, understand, read and write simple English, and be able to sign her name in English, unless she's physically unable.

Steps for becoming a U. S. citizen are also explained in the I&NS booklet Form N-17. This is what she must do:

- File an "Application to File Petition for Naturalization," Form N-400, or, in the case of parents filing in behalf of a child, Form N-402; there's no fee at this time.
- Next, she must appear before a naturalization examiner when notified. At this time she'll be assisted in filing the legal papers, known as a petition for naturalization, in the naturalization court. The fee is $25, and it is the only fee charged.

When your wife goes before the examiner she must be accompanied by two U. S. citizens—witnesses who have known her well for as much of the last three years as possible. They must also have seen her often during the last six months in the state in which she then resides. The rules for witnesses vary according to the applicant's circumstances and are covered fully in the Form N-17 booklet.

During the examination your wife will be given a test to determine if she knows something about the history and form of government in the United States. The questions are in simple English, and the answers require knowledge only of subjects that anyone who has really tried to can learn to become familiar with.

Citizenship classes designed to help persons pass this test are held throughout the country at many public schools, by various community groups and by correspondence courses from some educational institutions. The federal government, of course, publishes citizenship textbooks which can be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. An I&NS booklet, "Information Concerning Citizenship Education to Meet Naturalization Requirements" (Form M-132), contains more information about these courses. It can be obtained at any I&NS office.

- Not less than 30 days after the examination has been taken and petition filed, your wife will undergo a final court hearing. At that hearing a judge will make a final determination if she is qualified to become a citizen. If the I&NS were going to recommend against it, she would have been told so before the hearing.

When the court decides that she should be made a citizen, she will be required to take an oath of allegiance to the United States. In doing so, she gives up allegiance to her native country and promises to support and defend the Constitution and laws of this country.

If you are married to an alien and you receive orders for duty overseas and your wife is authorized to accompany you, the residency and physical presence laws are waived (BuPers Manual 6210200). These are the steps you should take:

- File the Application for Petition for Naturalization (Form N-400) as usual, when you know for sure you're going to be stationed overseas.
- Once your wife's departure for overseas is scheduled, the Navy will give her a "Certificate of Overseas Assignment to Support Application to File Petition for Naturalization" (DD Form 1278) about 90 days before the departure date. This form must be filed with the local I&NS office. It's proof that your wife is going overseas with you, and it's the only form the I&NS will accept. This form speeds up the naturalization process for your wife so that she can possibly become a U. S. citizen before you leave.

As soon as your wife is naturalized, apply for her passport through your personnel office so that it can be issued in time for her departure. These rules also hold true for any alien children you might have.

One other special naturalization case is the surviving spouse of a U. S. citizen serviceman. If he dies during a period of honorable and active service, and his alien wife lived with him in marital union at the time of his death, she may become a naturalized citizen in the usual way, but with two advantages:

- The petition may be filed in any naturalization court, not just at the place where she lives.
- She may also be naturalized without having lived in the U. S. or having been physically present there for any particular time after her admission for permanent residence.

Naturalization and Citizenship of Children

Natural alien children under the age of 16 who are living with you and your wife in the States will generally become U. S. citizens automatically at the same time as your wife. Certificates of citizenship in a child's own name showing that he or she was naturalized on the same date as your wife, may be obtained for a $10 fee.

Natural children may also become citizens by having their parents apply for them. If they do this before age 18, they are entitled to certain exemptions from the regular naturalization laws. For example, they do not have to be able to speak, read or write English or live in the U. S. for any particular period of time. All exemptions are given in booklet Form N-17.

If you and your alien wife adopt a foreign child overseas, that child does not automatically become a U. S. citizen, but he or she does get some exemptions to the naturalization laws. For example, the child must live in the U. S. for only two years subsequent to the adoption. He or she does not have to speak, read or write English. All these exemptions are also in booklet Form N-17. To qualify, the child must have been adopted before reaching age 16. If you receive orders for overseas duty and your adoptive child is authorized to accompany you, the two years' residence is waived. Here again, Form DD 1278 must accompany the naturalization application Form N-402.

Congratulations are in order for having met the girl of your dreams while overseas. But before you take the plunge, remember you have legal obligations, and also remember that these laws were made to protect you and your family.

They're not meant to hassle you.

—JO1 Tom Jansing

PROFILES
OF THE FLEET

CDR Howard Petty

Aviator Trains Middies

Commander Howard C. Petty is enthusiastic about his duty as an instructor at Annapolis and the part he played this past summer aboard ships of the U. S. Sixth Fleet, helping to coordinate the 1974 Mediterranean Training of Midshipmen.

At sea with the Academy men and other midshipmen from NROTC units across the nation, CDR Petty held the billet of Midshipman Liaison Officer.

He visited various ships by way of helicopter or highline, "carrying the Academy word," and overseeing the Annapolis midshipmen as they went through their paces with the operating forces.

An aviator who won his wings in 1957, Commander Petty enjoyed his ship-to-ship visits, "This is one of the ways left for me to get back into the air," he said.

Back at Annapolis, the commander teaches military and international law. He maintains a home there with his wife, Barbara, and their 10-year-old son, Howard, Jr. Off duty he likes fishing, classical music—especially Beethoven and Chopin—and, like many of the Academy's faculty, he's an avid sports fan. The commander played football in high school and again in college.

A native of Gastonia, N. C., Petty was graduated from Johnson C. Smith University in Charlotte in 1954. He entered the Navy's flight program in 1956 and won his wings the following year. His first duty with naval air was flying EC-121s (military version of the four-engine *Connie*) with an airborne early warning squadron in the North Atlantic.

In quick succession, he saw further aviation service at the Naval Air Technical Training Unit, Olathe, Kans.; as flight deck officer aboard the carrier *Oriskany*; and as assistant air frames officer on the staff of Commander Fleet Air Western Pacific in Japan.

Commander Petty then served with a transport squadron—VR 21—at Barbers Point in Hawaii and, while with that unit, he was officer in charge of a seven-plane detachment operating out of the Naval Air Station Alameda near San Francisco, Calif.

The commander has strong feelings about the Navy and people—in their relationships with each other. The Navy, he said, presents "new and challenging assignments, education and travel. It's a good life."

An aviator to the core, Commander Petty looks forward to returning to flying status. "I'll fly anything, even a kite, as long as I'm on it."

Left: Commander Petty looks out at the aircraft carrier USS Independence (CVA 62) as he contemplates a return to flying status sometime in the future.

ENS Michael J. O'Shaughnessy

Bull Ensign

Many Navy people had heard of a "bull" ensign, but few were able to recognize one until the fast tank landing ship USS *Peoria*, with Ensign Michael J. O'Shaughnessy aboard, visited U. S. Naval Base, Subic Bay, R. P.

"Bull" ensign is a title tagged jokingly to senior ensigns acknowledging their coming promotions to lieutenants (jg). The humor in the title is to infer that the "bull" ensign is "boss" of usually himself and, at times, as many as two or three more ensigns in his command.

"I fully support both the serious and humorous sides of a proud naval tradition," claimed *Peoria's* deck and gunnery officer, "and I'm always willing to sport a joke for the traditional amusement of my shipmates." In support of the humor related to his title, O'Shaughnessy wears highly visible gold ensign bars on his shirt collar, with the word "BULL" inscribed in the center of the bars.

Of unknown origin aboard the San Diego-based amphibious ship, these bars have been passed down from recently promoted lieutenants (jg) to senior ensigns during *Peoria's* past five years of naval service. None of the former "bull" ensigns, however, have worn the bars.

"I guess it's because of my former academy training," reflected the 1973 Annapolis graduate. "I was never much of a supporter of traditions until I attended the academy where, with understanding of their importance, I have gained a strong desire to believe in and uphold them."

Reminiscing, O'Shaughnessy spoke of his first traditional goals . . . "to help establish camaraderie and . . . beat Army!" The 225-pound, former Navy defensive tackle smiled and said, "This had to be one of the greatest traditional endeavors I participated in. The main reason was not so much being a member of the football team, but the friendships developed as midshipmen." (O'Shaughnessy was on the Navy team that flew to Colorado Springs to play undefeated Air Force. With 33 seconds left, they came from behind to whip Air Force 17-14.)

Traditions of establishing camaraderie, beating the rival service academies, and wearing "bull" ensign bars, however, are just a few of O'Shaughnessy's beliefs. With his sights set on a naval career, the 24-year-old bachelor added, "I believe young naval officers should be at sea to gain experience in operations, engineering, deck and gunnery, and provide a better effort in expanding our heritage and historic significance."

When O'Shaughnessy is promoted this year, he will have worn the "bull" ensign bars a total of 168 days. He says, however, "Being an ensign for nearly two years is a long time. By wearing the 'bull' bars, I am constantly reminded that my wait for promotion is becoming shorter."

—Story & photos by JOC Milt Harris, USN

Below: Mr. O'Shaughnessy, "bull" ensign onboard Peoria, proudly wears his special bars. Right: ENS O'Shaughnessy talks with SN Monte Hetrick.

PROFILES OF THE FLEET

MU1 Barry Craig Sings Out Loud & Clear

Somehow, though the route was a winding one, with a number of side roads, he knew he would get there. And MU1 Barry Craig did. As lead male singer in the United States Navy Concert Band, he's at the top of his music field in the Navy. The way up wasn't easy; it seldom is. It took him eight long years to reach his goal.

"I had auditioned for the Navy Band twice," says Barry, "but back in the old days before the 'Now Navy,' there just wasn't any place for pop or contemporary singers. They told me I was good, but they just couldn't use my talents at the time."

When it seemed that Barry's talents as a vocalist and accomplished pianist would be wasted, he still carried on in true Navy fashion, striking for boatswain's mate, eventually becoming a yeoman, and serving two tours in the Republic of Vietnam. He is a plank-owner of USS *Butte*.

His big break came during his second tour of duty in Vietnam in 1971.

Barry remembers, "I had performed in the All-Navy Talent Contest before, but only at the naval district level. It was arranged at the last minute that I should go to the Navywide contest in Newport that year. Well, after hopping a plane and spending 22 hours in the air, I figured I'd arrive the night before, giving me plenty of time to rest up for the contest." But like most "best laid plans," this one had a big flaw, the International Date Line. "I arrived the same evening, with the contest already in progress. I was so tired, I just told them to forget it."

But some friends were there to urge Barry on. He stepped on stage, sang, and walked away with first runner-up honors.

"Things just seemed to keep on rolling after that." That same year, the Navy announced openings for contemporary singers. Barry was accepted and became the first vocalist to attend the Navy-managed School of Music at Little Creek.

With such a start, Barry is destined for bigger and better things. His rendition of "Spirit of America," a noncommercial recording on what's right in America was selected for release by the National Association of Broadcasters. Recently made available as a public service nationwide, this record could make him a singing star with audiences outside as well as within the Navy. "Now it's just a matter of time to sit and wait," he says hopefully.

It has been a busy period for the young pop singer. A U. S. Navy Band Christmas Show recording, with Barry doing a solo number, was released internally last year and will be made available to public radio stations by the Navy Recruiting Command this year. Barry has also "starred" in several sea service commercials for the Navy's internal use, over SITE (Shipboard Information, Training, and Entertainment) systems in the fleet.

You will be hearing and seeing more of Barry Craig in the future—a success story—the Navy way.

—JO2 D. Matthews

MMFN Chris Debe

A Hot Job To Be Done

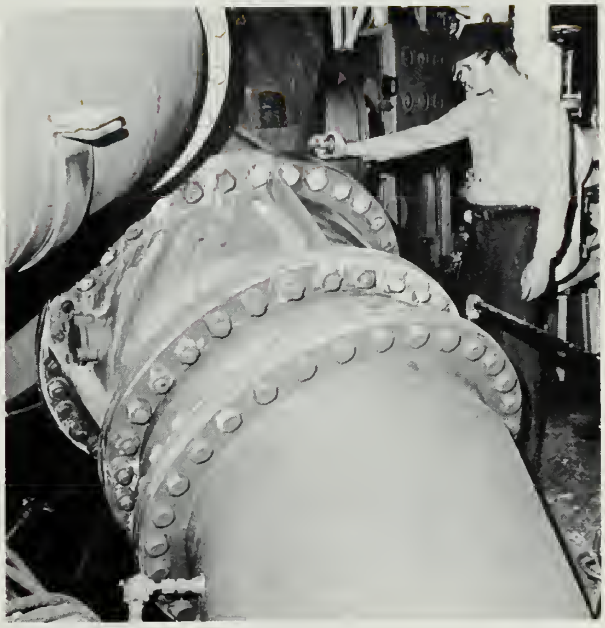
Perched on a stool inside a modern, air-conditioned engine control room, Machinist's Mate Fireman Chris Debe described the environment he's worked in for three years aboard USS *Shasta* (AE 33), "It's 102 degrees in the engine room, and at times it gets even hotter. Sure it's a hot job but it's one that needs to be done."

The engine control room, located deep in *Shasta* is adjacent to the engine room itself, where engineers receive speed and direction instructions from the officer of the deck. The engine room houses the ship's propulsion plant and it's Debe's job to keep that machinery purring. He also helps maintain the evaporators, air-conditioning plants and generators.

"The evaporators distill salt water into fresh and the generators are *Shasta's* power source," explained Debe. "Without them *Shasta* couldn't do her job, replenishing big U. S. Seventh Fleet ships with ammunition."

Since Debe came aboard *Shasta* he has seen a lot of the U. S., from Charleston to San Francisco, and other parts of the world. He has visited Jamaica, Colombia, the Panama Canal Zone and Acapulco. In the western Pacific, he has seen Bangkok, the Republic of the Philippines, Taiwan and Japan. Traveling is what he likes most about the Navy. "That, and all the friends I've made," he said.

Debe's family lives on a 25-acre farm, but it wasn't hard for him to adjust from farm life to cramped shipboard life. "But I do miss the change of seasons and especially the snow," he asserted while wiping the perspiration from his brow.



He is uncertain about his plans when his enlistment expires. If he leaves the Navy, he says, "I'll either go to college or pursue a career in the construction business. I think I'm ready for either because the Navy has helped me mature quite a bit."

—Story by JO2 Paul Long
—Photos by PH1 John R. Sheppard

Right and below: MMFN Debe performs some of his daily duties.

PROFILES OF THE FLEET

AW1 Benjamin Holder
LAMPS Plane Captain

"Oil cooler access doors confirmed closed."

"Pit-pin locked."

"Crewman's checklist complete."

It's that little extra which separates the typically effective aircrewman from the one who rates as outstanding.

Aviation Antisubmarine Warfare Operator (AW) 1st Benjamin D. Holder doesn't have to make these reports—it's not his responsibility to confirm that the oil cooler access doors are closed—but to an SH2 helicopter pilot, the words are comforting.

Holder, a 14-year Navy veteran and "plank owner" in the LAMPS (Light Airborne Multi-Purpose Systems) Program, is not your average AW. Originally trained to be an AW in the P3 aircraft, he switched to helicopters when the Navy asked for volunteers for the LAMPS program in 1971. He has never regretted the change.

"LAMPS is more challenging—you're all alone in the operator's seat," he explained. "The SH2 is the only ASW aircraft that carries only one ASW systems operator—you must make all the decisions yourself."

Holder began his Navy career as a radioman in USS *Okinawa* (LPH 3). From there he went to VP-45 in Jacksonville, Fla., and qualified as first tech and collateral duty inspector (electronics) on the P3 aircraft. In 1968 he changed his rate to AW. He was at Fleet Airborne Electronics Training Unit, Atlantic, Patuxent River, Md., as a P-3C instructor when he got the chance to join the LAMPS Program. Since then, he's been attached to HSL-30 and HSL-32, both east coast LAMPS squadrons.

Holder was Sailor of the Month in VP-45 and HSL-30, and Sailor of the Quarter aboard USS *Blakely* (DE 1072) (HSL-32 LAMPS DET 8), a first for the LAMPS community.

Out of necessity, the LAMPS AW must be multitalented. Besides regular AW duties Holder is an SH2 plane captain; the weapons loading team leader; assists the ship sonarmen in acoustic analysis and, in his case, the detachment's training officer. "There's never a dull moment when you're an AW in the LAMPS community," he said.

Having recently completed his second six-month LAMPS Mediterranean deployment, he's now back at HSL-32 at NAS Norfolk doing what he likes best—assisting the squadron's MCPO in matters pertaining to the younger enlisteds.

"In today's all-volunteer Navy, we are getting a higher quality sailor," he said, "but it's too early in the program to tell whether they're really career oriented. We must consistently make them aware of our concern for their future.

"But," he added, "the younger people do not appear to have the esprit de corps that has been so much a part of my Navy career. There doesn't seem to be as much pride in the work—too much individualism!

"The Navy needs to focus its efforts on reversing this trend," he said. He adds, however, that "HSL-32's participation in Phase II of the Navy's Equal Opportunity Program is strengthening the chain of command and making my job a lot easier."

—Photos and story by LT B. V. Buzzell

LEFT: AW1 Holder inspects the tail rotor as part of his SH-2 plane captain duties. Above: AW1 Holder goes through his aircrewman's check list in preparation for flight.

JO2 Vic Pinzon

Entertaining Midway's Crew

Journalist 2nd Class Vic Pinzon adds a touch of class and professionalism to shipboard entertainment.

As station manager for USS *Midway's* (CVA 41) closed circuit radio and television systems, JO2 Pinzon is responsible for all programming and serves as anchor man on the evening news. He also hosts a popular early morning radio show, trains *Midway's* on-the-air talent, and organizes special shows and dances.

"It's a busy schedule," he readily admits, "but I enjoy my work immensely."

Even with his tight schedule, Pinzon still finds time to do what he really enjoys most—performing on stage. His off-duty activities include performances at various nightclubs in Japan, Hong Kong, the Republic of the Philippines and U. S. military clubs.

In 1966, at the age of 17, he cut a few records, one of which, "Live for Today," made the Top 100 nationally and was rated number one for several weeks in his native upstate New York.

Growing tired of civilian life and yearning for a change, Vic enlisted for four years in the Marine Corps. After basic training, he attended the Defense Information School before being assigned to duty in Vietnam. In addition to serving as a rifleman, Vic worked for the Combat Information Bureau and supplied 15-minute features entitled "Vietnam Diary" to the Mutual Radio Network. In his spare time, he entertained fellow Marines both stateside and abroad.

Civilian life again found him performing before live audiences at various nightclubs, including Grossingers in upstate New York. Leaving the nightclub circuit, he turned to broadcasting in order to spend more time with his wife Kathy and their two children. He worked as a newscaster with WINR in Binghamton and WHAM in Rochester, New York.

Still, Pinzon yearned for world travel. A unique opportunity presented itself for him and his family to see the Orient. The opportunity was enlistment in the Navy as a military broadcaster.

Aside from the travel, newscasting and performing, Vic arranges for outside entertainment for *Midway's* crew. His biggest coup to date was arranging for Frank Sinatra to entertain aboard. More than 3000 crewmembers, dependents and guests attended that show in the ship's hangar bay.

Vic recalled, "Observing the crowd's warm response had to be the greatest experience of my life."

—By JO3 Bob Remington

1975
AUTO GAS MILEAGE GUIDE

According to the Federal Energy Administration, automobiles use nearly one-third of the country's petroleum each year. That fact alone would give emphasis to efforts designed to cut down on the use of gasoline—from car-pooling to combining shopping errands and avoiding unnecessary trips. But the core of the effort to conserve gasoline is still the automobile itself—how many miles does it get to the gallon vs. the auto's weight, size of engine, driving conditions and other conditional factors.

How do the 1975 model autos stack up in the miles per gallon department? To answer this, the U. S. Environmental Protection Agency and the Federal Energy Administration have joined forces in producing the "1975 Gas Mileage Guide for New Car Buyers." Besides listing the estimated fuel economy of over 250 new car line and engine combinations, the guide makes two important points—

- You, the driver, can help conserve energy by buying the most fuel-efficient new car that meets your needs.
- When you get ready to buy, look for labels on 1975 model cars—these state the fuel economy for that car, thereby helping you make a selection that's good for you.

The accompanying table lists the 250 new car lines and their engines that meet the 1975 emission standards and were certified for sale in the United States as of 15 Sep 1974. Two tests were run on each car. The first was the city driving test, patterned on conditions the average driver encounters going to and from work—the average speed of city tests was 20 miles per hour and included many stops and starts. The second test, the highway driving test, included simulated interstate highway and rural driving—the average speed in this phase of the tests was 49 miles per hour.

The U. S. Environmental Protection Agency (EPA) tests for each car lasted 28 minutes for the city portion and 12 minutes for the highway segment.

As to labels some new cars carry, EPA states that, "Cars built by manufacturers who are participating in the Voluntary Fuel Economy Labeling Program should have a label on a rear window indicating the fuel economy of that vehicle. In some cases, the fuel economy will not be the same as listed (in the accompanying tables).

"This is because certain manufacturers have elected to give more detailed information on the label that is specific to the weight, transmission and axle ratio of the individual car, as well as to the car line, engine size, fuel system, and catalyst usage. Fuel economy figures based on this detailed car description," the Guide says, "are more precise than those listed in this guide since more factors about the car are taken into consideration when computing the fuel economy information."

The cars listed in the table were tested by professional drivers on a dynamometer, a machine which simulates many driving conditions. The EPA defends its use of the dynamometer by stating that the machine allows tests to be conducted in exactly the same way each time—the results, therefore, are more scientifically comparable.

In the tests, the city and highway fuel economy for each car tested was measured separately. Grouped by car line, engine size, number of cylinders and fuel system, more than one car of each group was tested.

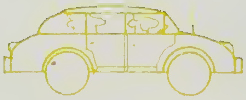
However, the EPA states that the fuel economy figures for each group of cars on the list are estimates based on the results of these tests.

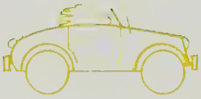
"This does not mean that you, as a driver, necessarily will get the same fuel economy," the EPA said.

Many factors influence the economy of individual cars:

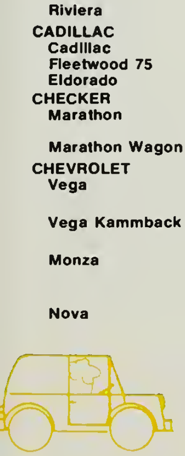
- Weight—is the single, most important factor. The smaller the car, generally, the better the fuel economy.
- Optional equipment—usually requires more gasoline to operate such as automatic transmission and air-conditioning.
- Driving habits—affect fuel economy; frequent starts and stops rob gasoline as do short trips, idling and uneven speed.
- Condition of engine—a tuned engine results in the best fuel economy and performance; keeping the engine in tune eliminates a lot of headaches.

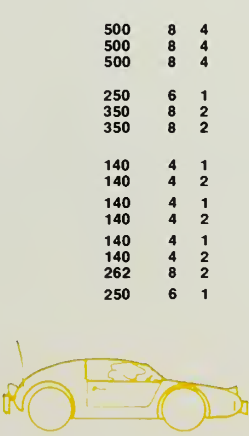
The accompanying table lists only those models which have been tested to date. EPA states that copies of the "1975 Gas Mileage Guide" are available to the public. For personal copies of the current guide, you can write: Fuel Economy, Consumer Information Center, Pueblo, Colo. 81009. For bulk copies of the Guide, write: Fuel Economy, Federal Energy Administration, Washington, D.C. 20461.

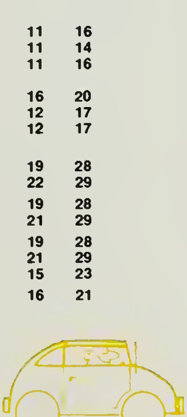


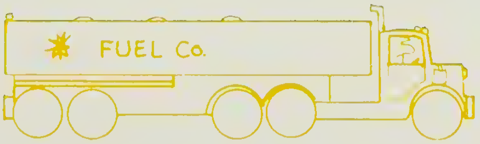


Manufacturer/Car line	Engine size (cu. in. disp.)	Cylinders	Carburetor (barrels/fuel inj.)	Catalyst	Fuel economy (miles per gal.)	
					City	Hwy.
ALFA ROMEO						
Alfetta	120	4	FI		19	25
2000 Spider	120	4	FI		19	27
AMERICAN MOTORS						
Gremlin	232	6	1		19	24
	258	6	1		21	30
	304	8	2	X	14	19
Pacer	232	6	1		18	24
	258	6	1		17	25
Hornet	232	6	1		18	24
	258	6	1		17	25
	304	8	2	X	14	19
Hornet Wagon	232	6	1		18	24
	258	6	1		17	25
	304	8	2	X	14	19
Matador	232	6	1	X	14	19
	258	6	1		16	19
	258	6	1	X	15	21
	304	8	2	X	13	17
	360	8	2	X	13	15
	360	8	4	X	12	16
	401	8	4	X	11	15
Matador Wagon	258	6	1		16	19
	304	8	2	X	13	17
	360	8	2	X	13	15
	360	8	4	X	12	16
	401	8	4	X	11	15
ASTON MARTIN						
Aston Martin	326	8	8	X	9	14
AUDI						
Fox	97	4	FI		21	34
100	114	4	FI		18	28
AUSTIN MORRIS						
MG Midget	91	4	1		21	32
BMW						
2002	121	4	2		19	30
530	182	6	FI		14	21
3.0S	182	6	FI		14	21
BRICKLIN						
Bricklin	351	8	2		12	17
BUICK						
Apollo	250	6	1	X	16	21
Skylark	231	6	2	X	16	24
Apollo/Skylark	260	8	2	X	15	19
	350	8	2	X	14	19
	350	8	4	X	14	18
Skyhawk	231	6	2	X	19	25
Century/Regal	231	6	2	X	16	24
	350	8	2	X	12	19
	350	8	4	X	13	20
Century Wagon	350	8	4	X	12	16
LeSabre	350	8	4	X	12	16
	400	8	4	X	12	15
	455	8	4	X	12	15
LeSabre Limousine	455	8	4	X	11	15
Estate Wagon	400	8	4	X	11	15
	455	8	4	X	11	15
Electra	400	8	4	X	11	15
	455	8	4	X	11	15
Riviera	455	8	4	X	12	15
CADILLAC						
Cadillac	500	8	4	X	11	16
Fleetwood 75	500	8	4	X	11	14
Eldorado	500	8	4	X	11	16
CHECKER						
Marathon	250	6	1	X	16	20
	350	8	2	X	12	17
Marathon Wagon	350	8	2	X	12	17
CHEVROLET						
Vega	140	4	1	X	19	28
	140	4	2	X	22	29
Vega Kammback	140	4	1	X	19	28
	140	4	2	X	21	29
Monza	140	4	1	X	19	28
	140	4	2	X	21	29
	262	8	2	X	15	23
Nova	250	6	1	X	16	21
	262	8	2	X	14	18
	350	8	2	X	14	19
	350	8	4	X	13	20
Camaro	250	6	1	X	16	21
	350	8	2	X	14	19
	350	8	4	X	13	20
Chevelle	250	6	1	X	16	21
	350	8	2	X	13	18
	400	8	4	X	13	17
	454	8	4	X	11	16
Malibu Wagon	350	8	2	X	12	18
	400	8	4	X	11	17
	454	8	4	X	11	15
Chevrolet	350	8	2	X	12	18
	400	8	4	X	11	17
	454	8	4	X	11	15
Chevrolet Wagon	400	8	4	X	11	15
	454	8	4	X	10	14
Monte Carlo	350	8	2	X	13	18
	400	8	4	X	13	17
	454	8	4	X	11	16
Corvette	350	8	4	X	13	20
CHRYSLER						
Cordoba	318	8	2		11	16
	318	8	2	X	13	17
	360	8	2	X	13	22
	360	8	4		11	18
	400	8	2	X	13	16
	400	8	4	X	11	17
	400	8	4		10	17
Chrysler	360	8	2	X	11	18
	400	8	2	X	11	15
	440	8	4	X	10	16
Chrysler Wagon	400	8	2	X	10	15
	440	8	4	X	10	16
Imperial	440	8	4	X	10	16
DATSUN						
B-210	85	4	2		27	39
710	119	4	2		22	33
710 Wagon	119	4	2		22	33
610	119	4	2		22	33
610 Wagon	119	4	2		20	29
280Z	168	6	FI		16	25
DODGE						
Colt	98	4	2		20	30
	122	4	2		19	28
Colt Wagon	98	4	2		21	31
	122	4	2		19	28
Dart	225	6	1	X	17	23
	318	8	2		11	16
	318	8	2	X	13	20
	360	8	4		13	19
Coronet	225	6	1	X	14	22
Coronet/Charger	318	8	2		11	16
	318	8	2	X	13	17
	360	8	2	X	13	22
	360	8	4		11	18
	400	8	2	X	13	16
	400	8	4	X	11	17
	400	8	4		10	17
	440	8	4	X	10	15
Coronet Wagon	318	8	2	X	12	17
	360	8	2	X	11	18
	400	8	2	X	11	15
	400	8	4	X	11	16
	400	8	4		10	14
Monaco	318	8	2	X	12	17
	360	8	2	X	11	18
	400	8	2	X	11	15
	400	8	4		10	14
	440	8	4	X	10	15
Monaco Wagon	400	8	2	X	10	15
	440	8	4	X	10	16
FERRARI						
Dino 308 GT-4	179	8	8		8	15





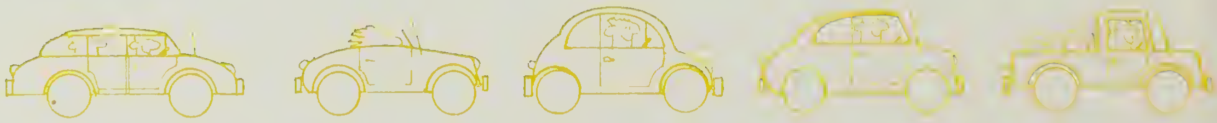




1975

Manufacturer/Car line	Engine size (cu. in. disp.)	Cylinders	Carburetor (barrels/fuel inj.)	Catalyst	Fuel economy (miles per gal.) City	Hwy.
FIAT						
128	79	4	2		20	28
128 Wagon	79	4	2		20	28
FORD						
Pinto	140	4	2		18	26
	171	6	2	X	16	22
Pinto Wagon	140	4	2		18	26
	171	6	2	X	15	22
Mustang II	140	4	2		18	26
	171	6	2	X	15	22
	302	8	2		10	18
Maverick	200	6	1	X	17	24
	250	6	1		14	18
	250	6	1	X	16	21
	302	8	2		10	18
	302	8	2	X	13	18
Granada	200	6	1	X	17	24
	250	6	1		14	18
	250	6	1	X	15	20
	302	8	2	X	12	16
	351	8	2		12	16
Torino Elite	351	8	2	X	11	16
	400	8	2	X	10	14
	460	8	4	X	10	16
Torino Wagon	351	8	2	X	11	15
	400	8	2	X	10	14
	460	8	4	X	10	15
Ford	351	8	2	X	11	15
	400	8	2	X	10	14
	460	8	4	X	10	16
Ford Wagon	400	8	2	X	9	14
	460	8	4	X	10	15
Thunderbird	460	8	4	X	10	15
HONDA						
Civic	75	4	2		27	39
Civic CVCC	91	4	3		27	39
LAMBORGHINI						
Urraco	150	8	8		8	14
LINCOLN-MERCURY						
Bobcat	140	4	2		18	26
	171	6	2	X	15	22
Bobcat Wagon	140	4	2		18	26
	171	6	2	X	15	22
Comet	200	6	1	X	17	24
	250	6	1		14	18
	250	6	1	X	16	21
	302	8	2		10	18
	302	8	2	X	13	18
Monarch	200	6	1	X	17	24
	250	6	1		14	18
	250	6	1	X	15	20
	302	8	2	X	12	16
	351	8	2		12	16
Montego/Cougar	351	8	2	X	11	16
	400	8	2	X	10	14
	460	8	4	X	10	16
Montego Wagon	351	8	2	X	11	15
	400	8	2	X	10	14
	460	8	4	X	10	15
Mercury	400	8	2	X	10	14
	460	8	4	X	10	15
Mercury Wagon	400	8	2	X	9	14
	460	8	4	X	10	15
Lincoln Continental	460	8	4	X	10	15
Continental Mark IV	460	8	4	X	10	15
MASERATI						
Merak	181	6	6		10	17
Khamsin	301	8	8		9	13
Bora	301	8	8		9	13
MAZDA						
808	96	4	2		21	30
808 Wagon	96	4	2		21	30
RX-3	70	2R*	4		14	20
RX-3 Wagon	70	2R*	4		14	20
RX-4	80	2R*	4		14	20
RX-4 Wagon	80	2R*	4		14	20
MERCEDES-BENZ						
240D	147	4	FI		24	31
300D	183	5	FI		24	31
230	141	4	1	X	16	20
280/280C	167	6	4	X	15	20
280S	167	6	4	X	15	20
450 SE/SEL	276	8	FI	X	11	17
450 SL/SLC	276	8	FI	X	11	17
OLDSMOBILE						
Omega	250	6	1	X	16	21
	260	8	2	X	15	19
	350	8	2	X	14	19
	350	8	4	X	14	18
Starfire	231	6	2	X	19	25
Cutlass	250	6	1	X	16	21
	260	8	2	X	15	19
	350	8	4	X	15	20
	455	8	4	X	13	19
Cutlass Wagon	350	8	4	X	14	18
	455	8	4	X	13	18
Delta 88	350	8	4	X	14	18
	400	8	2	X	12	17
	455	8	4	X	13	18
Custom Cruiser Wagon	400	8	4	X	11	15
	455	8	4	X	12	16
Olds 98	400	8	4	X	11	15
	455	8	4	X	12	16
Toronado	455	8	4	X	11	16
OPEL						
1900 Manta	116	4	FI		19	27
1900 Wagon	116	4	FI		19	27
PEUGEOT						
504	120	4	2		20	27
504 Wagon	120	4	2		17	25
504 Diesel	129	4	FI		27	35
504 Diesel Wagon	129	4	FI		27	35
PLYMOUTH						
Valiant/Duster	225	6	1	X	18	23
	318	8	2		11	16
	318	8	2	X	13	20
	360	8	4		13	19
Fury	225	6	1	X	14	22
Road Runner/Fury	318	8	2		11	16
	318	8	2	X	13	17
	360	8	2	X	13	22
	360	8	4		11	18
	400	8	2	X	13	16
	400	8	4	X	11	17
	400	8	4		10	17
	440	8	4	X	10	15
Fury Wagon	318	8	2	X	12	17
	360	8	2	X	11	18
	400	8	2	X	11	15
	400	8	4	X	11	16
	400	8	4		10	14
Gran Fury	318	8	2	X	12	17
	360	8	2	X	11	18
	400	8	2	X	11	15
	400	8	4		10	14
	440	8	4	X	10	15
Gran Fury Wagon	400	8	2	X	10	15
	440	8	4	X	10	16
PONTIAC						
Astre	140	4	1	X	19	28
	140	4	2	X	21	29
Astre Wagon	140	4	1	X	19	28
	140	4	2	X	21	29
Ventura	250	6	1	X	16	21
	260	8	2	X	15	19
	350	8	2	X	14	19
	350	8	4	X	14	18
Firebird	250	6	1	X	16	21
	350	8	2	X	13	18
	350	8	4	X	12	18
	400	8	4	X	13	18
LeMans	250	6	1	X	16	21
	350	8	2	X	12	18
	350	8	4	X	13	17

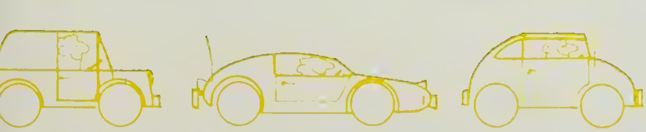
*Rotary engine with two rotors

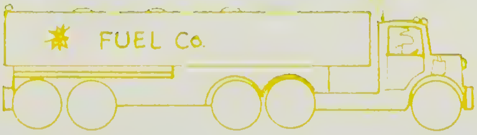


Manufacturer/Car line	Engine size (cu. in. disp.)	Cylinders	Carburetor (barrels/fuel inj.)	Catalyst	Fuel economy (miles per gal.)	
					City	Hwy.
LeMans/Grand AM	400	8	4	X	13	18
Grand AM	400	8	2	X	12	17
	455	8	4	X	12	17
LeMans Wagon	400	8	2	X	12	17
	400	8	4	X	12	15
Pontiac	400	8	2	X	12	17
	400	8	4	X	12	15
	455	8	4	X	11	18
Pontiac Wagon	400	8	4	X	11	15
	455	8	4	X	11	15
Grand Prix	400	8	2	X	12	17
	400	8	4	X	13	18
	455	8	4	X	12	17
PORSCHE						
914	109	4	FI		21	33
	120	4	FI		20	30
911S Carrera	164	6	FI		18	29
ROLLS-ROYCE						
Silver Shadow	412	8	2	X	9	12
SAAB						
99	121	4	FI		21	27
SUBARU						
Subaru	83	4	2		25	33
Subaru Wagon	83	4	2		23	31
TOYOTA						
Corolla	97	4	2		21	33
Corolla Wagon	97	4	2		21	33
Corona	133	4	2		19	28
Corona Wagon	133	4	2		19	28
Celica	133	4	2		18	27
Corona Mk. II	156	6	2	X	17	21
Mk. II Wagon	156	6	2	X	17	21
TRIUMPH						
Spitfire	91	4	1		21	32
TR-7	122	4	2		20	29
VOLKSWAGEN						
Beetle	97	4	FI		22	33
Rabbit	90	4	2	X	24	38
	90	4	2		24	38
Dasher	90	4	2	X	23	35
	90	4	2		23	36
Dasher Wagon	90	4	2	X	23	35
	90	4	2		23	36
Scirocco	90	4	2	X	24	38
	90	4	2		24	38
Thing	97	4	FI		22	33
VOLVO						
240	121	4	FI		16	26
245 Wagon	121	4	FI		17	24
160	182	6	FI		15	22

Vans, Pickups, Buses, Etc.

Manufacturer/Car line	Engine size (cu. in. disp.)	Cylinders	Carburetor (barrels/fuel inj.)	Catalyst	Fuel economy (miles per gal.)	
					City	Hwy.
A M GENERAL						
Post Office Vehicle	232	6	1		17	24
	258	6	1		14	18
CADILLAC						
Commercial Chassis	500	8	4	X	11	14
CHEVROLET						
Vega Panel Express	140	4	1	X	21	31
	140	4	2	X	22	31
LUV Pickup	110	4	2		19	27
Pickup	250	6	1	X	14	19
	350	8	2	X	12	17
	350	8	4	X	13	18
	454	8	4	X	10	14
Van	250	6	1	X	14	20
	350	8	2	X	12	17
	350	8	4	X	13	17
Blazer	250	6	1	X	14	18
	350	8	2	X	12	17
	350	8	4	X	13	17
El Camino	250	6	1	X	16	21
	350	8	2	X	13	18
	400	8	4	X	13	17
	454	8	4	X	11	16
DATSUN						
Pickup	119	4	2		20	31
DODGE						
Pickup	225	6	1	X	16	26
	318	8	2	X	13	18
Van	225	6	1	X	16	26
	318	8	2	X	13	18
Ramcharger	318	8	2	X	13	18
FORD						
Courier Pickup	109	4	2		19	25
Pickup	300	6	1	X	15	20
	302	8	2	X	13	18
	360	8	2		11	14
	360	8	2	X	11	17
	390	8	2		11	15
Van (Econoline/	300	6	1	X	15	20
Club Wagon)	351	8	2		11	17
Bronco	302	8	2	X	13	18
Ranchero	351	8	2	X	11	17
	400	8	2	X	10	15
	460	8	4	X	10	16
GMC						
Pickup	250	6	1	X	14	19
	350	8	2	X	12	17
	350	8	4	X	13	18
	454	8	4	X	10	14
Van	250	6	1	X	14	20
	350	8	2	X	12	17
	350	8	4	X	13	17
Jimmy	250	6	1	X	14	18
	350	8	2	X	12	17
	350	8	4	X	13	17
Sprint	250	6	1	X	16	21
	350	8	2	X	13	18
	400	8	4	X	13	17
	454	8	4	X	11	16
JEEP						
Jeep	232	6	1		17	20
	258	6	1		14	19
	304	8	2	X	15	19
MAZDA						
B 1600 Pickup	96	4	2		20	28
Rotary Pickup	80	2R*	4		13	20
*Rotary Engine with two rotors						
OLDSMOBILE						
Driveaway Chassis	455	8	4	X	12	16
PLYMOUTH						
Van	225	6	1	X	16	26
	318	8	2	X	13	18
Trail Duster	318	8	2	X	13	18
TOYOTA						
Hilux	133	4	2		18	27
Hilux Camper	133	4	2		18	25
Land Cruiser	258	6	2		10	15
VOLKSWAGEN						
Bus (Wagon, Kombi, Panel)	109	4	FI		18	25





letters

Gator Navy

SIR: The explosions pictured on page 25 of the November 74 ALL HANDS in the article "Gator Navy" were mislabeled. They were a part of a beach simulation of naval gunfire and air bombardment put in and fired by the Marines of Second Platoon, B Co., Third Engineer Battalion. The SEALS and UDT deserve credit for their work, but they did not explode anything during the operation. All demolition work was done by Marine combat engines., 2/Lt. A. R. C. USMC

• *We had no intention of slighting the Marine combat engineers. Our sincere aplogies go to the men of your platoon for failing to mention their good work.—Ed.*

Navy Buff

SIR: I was delighted to discover "For the Navy buff" in your January 1975 issue and hope it will be a recurring feature.

I can confirm your suspicion that holystoning continued after 5 Mar 1931. It was done on board USS *Wisconsin* (BB 64) during the summer of 1951 for the "edification" of embarked midshipmen, if nothing else.

Concerning the location of the islands on aircraft carriers, before World War II the Japanese built the carriers *Akagi* (1927) and *Hiryu* (1939) with lefthanded superstructures. They proved it was a bad idea.

I think the Japanese might have been mentioned again in the response about those "magnificent giants," the battleships. *Yamato* and *Musashi* were bigger than the *Iowas*.

On page 54, it is stated that Paul Revere "recoppered her in Boston." More accurately, Revere manufactured the copper sheeting in the first such mill established in the young nation. The actual shipboard work was accomplished by Captain Edward Preble, his crew and some civilian laborers he hired.

You are correct about *Constitution* having been built at the Hartt (or Hart) shipyard, but that yard was not located on the same site as the recently closed Navy Yard. The Hartt yard was located in Boston (not Charlestown) in the vicinity of the present Coast Guard base.

On page 56, *Constellation* is referred to as *Constitution's* sister ship. As the former was rated at 38 guns and the latter at 44, that's like calling a heavy cruiser and a battle cruiser "sister ships."—CDR Tyrone G. Martin, USN, 59th Commanding Officer, USS Constitution.

• *We appreciate your comments about the article and your thoughtfulness in pointing out the discrepancies.*—ED.

History Buff

SIR: After reading the December 1974 ALL HANDS and working the AlNav puzzle, I believe I've found all 45 World War II fighting ships plus the name of the contributor, Kamienski.

I would like to know if I missed any.

Your puzzle has really started people digging into Navy history and they are coming up with a lot of interesting facts. I look forward to other AlNav puzzles and enjoyment in ALL HANDS.—PMH2 M. B. C.

• *Thank you for your letter concerning the AlNav puzzle in the December* ALL HANDS. *It appeared that you had a perfect score, including the name of the contributor, Kamienski.*—ED.

Flight Deck Hazards

SIR: Having been in the ship safety business, including LAMPS systems safety, for a number of years now, I was dismayed to note two safety violations so prominently displayed on the inside back cover of the February ALL HANDS. One, the CO_2 bottle standing unattended on deck, is relatively minor (but shouldn't happen); the second is a real no-no. The two men in khakis and the petty officer in the background appear to be unauthorized sightseers. One of the men in khakis is wearing an ear protective device, but the other is not. Article 720.2 of the Standard Organization and Regulations of the U. S. Navy (OpNavInst 3120.32) spells out the requirements for helodeck safety quite clearly.

We try to educate the fleet through safety publications here at the Naval Safety Center. A gentle reminder in one of your columns about the hazards of flight deck operations would be helpful.—Cdr. R. F. Ackerman, USN.

• *We try to clear pictures we think may have safety violations but we cannot clear everything once it has been released, because of the time factors involved and publication deadlines. This photo was an official Navy photo which had been cleared previously for publication. However, we agree that safety should originate on site, and hope this will serve as a reminder to the Fleet (as well as to ourselves).*—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, Jefferson Davis Highway, Washington, D. C. 20360, four months in advance.

• *PT Boats*—A reunion is planned for all hands who served in PT boats, bases, fenders, supply, communications, casu units or were in any way connected with PT boaters for 28 Aug-1 Sep in San Diego, Calif. Calif. Contact PT Boats, Inc., P.O. Box 109, Memphis, Tenn. 38101.

• USS *Chandeleur* (AV 10)—A reunion is planned for 1-3 August in Nashville, Tenn. Contact Mrs. Kenneth E. Boyd, Rt. 4, Box 145, Culpeper, Va. 22701.

• USS *Essex* (CV 9)—A reunion is planned for all who served in her for 15-17 Aug in Louisville, Ky. Contact Bill Philpott, USS Essex (CV 9), Inc., P.O. Box 10123, Louisville, Ky. 40210, or phone (502) 778-8258.

• USS *Fletcher* (DD 445)—A reunion is planned for 1-3 August. Contact LCDR Warren W. Broome, USN (Ret), 5415 Masser Ln., Fairfax, Va. 22030.

• USS *Haddo* (SS 255)—A reunion is planned for 5-10 August in Nashville, Tenn. Contact E. L. Stough, 7051 E. Rosewood, Tucson, Ariz. 85710, or G. H. McMinn, Rt. 1, Box 165, Marion, Ark. 72364.

• USS *Bronstein* (DE 189)—1943-45 personnel interested in a reunion contact N. Roy Lindquist, 4118 N. Meade Ave., Chicago, Ill. 60634.

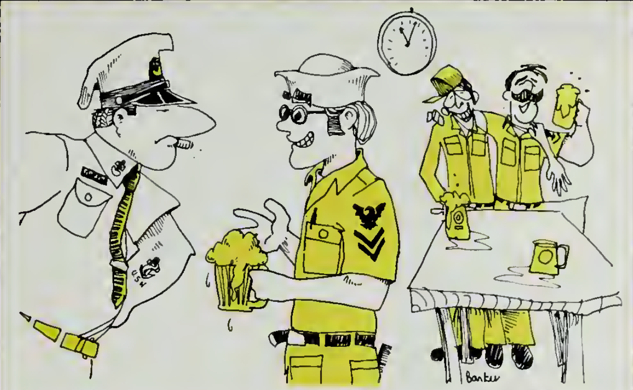
• USS *LST 1085*—Members who served in the Pacific Theater in WWII are planning a reunion. Those interested should contact George J. Miller, Colonial Bldg., Ross at Second, Pittsburgh, Pa. 15219.

• USS *Baltimore* (CA 68)—A reunion for WWII and Korean War shipmates is planned for 15-17 August in Pittsburgh, Pa. Contact Earl Harding, 187 Clever Rd., McKees Rocks, Pa. 15136.

• USS *Birmingham* (CL 62)—The 3rd annual reunion is planned for 15 and 16 August in Arlington, Va. Contact Joe W. Grimes, 3325 Belmont Court, Virginia Beach, Va. 23452.

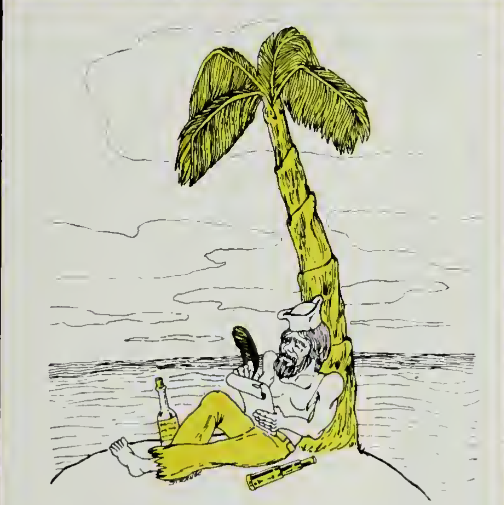
on the serious side

AX2 A. F. Barker, Jr.



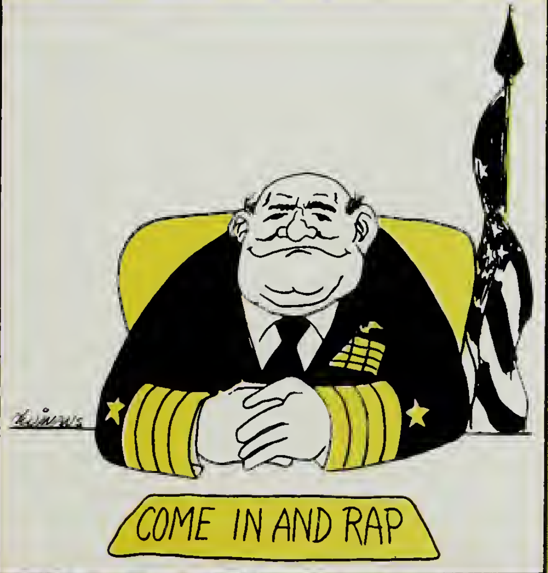
". . . Yes, Chief, we have a working party going. In fact, the party's working out real nice!"

SK3 Kurt A. Strange

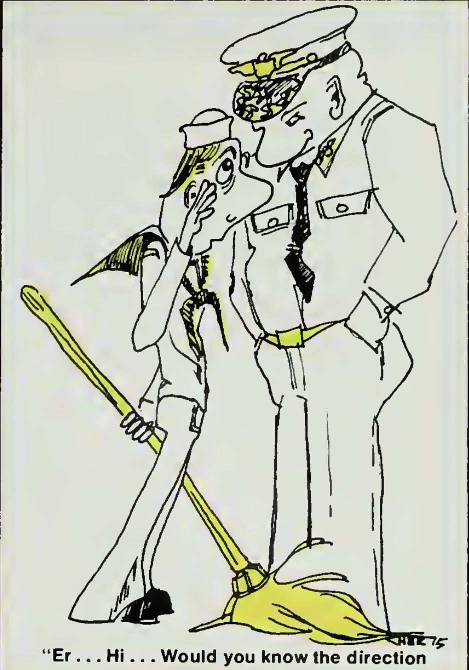


"Dear Detailer, Just a few questions about this fantastic preferred overseas duty I shipped over for . . ."

CTA1 Donald L. Winans

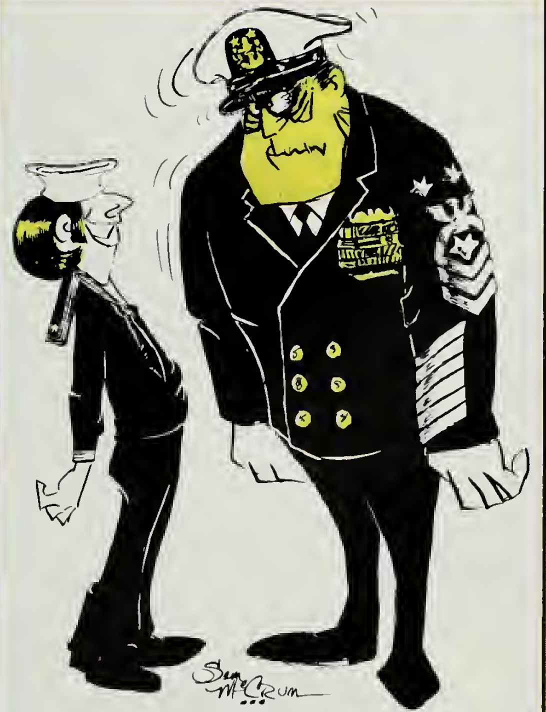


SA Sherry L. Vandemark



"Er . . . Hi . . . Would you know the direction to the gear locker?"

JOC Sam E. McCrum



"Guess I'll be wearing a uniform just like that pretty soon myself . . . like two peas in a pod, eh, Chief?"

TAFFRAIL TALK

Our hats are off to Ensign Deborah A. Burnette who became the first (we believe) Navy woman to be awarded the Navy-Marine Corps Medal for a personal act of heroism. She was awarded the medal for snatching a small child from the path of an auto last fall—badly injuring her knee in the flying dive.

A graduate of Clemson University (S. C.), Ensign Burnette is a member of our NIRA family—she's the editor of the weekly Chinfo NewsGram. Her citation, signed by the Secretary of the Navy, states, ". . . with complete disregard for her own safety and fully aware of the personal danger involved, unhesitatingly ran into the street, grabbed the child and tumbled to the ground out of the path of the speeding automobile.

"Although ENS Burnette was painfully injured in the fall to the pavement during the rescue, the child was unharmed . . ."

What the citation didn't say is that Deborah is also an attractive, quiet and unassuming person—she has the makeup and temperament of one who would put her life on the line to save another. Congratulations!

* * * * *

A recent release from Point Mugu caught our eye—on the subject of Navy pest controllers. Out there they make "snake calls" which, in a way, are similar to house calls. Seems the local snakes enjoy sunning themselves on patios, squirming around on the concrete as they take the noonday sun.

According to Point Mugu's pest controllers, it's best not to panic when spotting a snake—it could be a harmless gopher snake or king snake. These merely get a ride to an out-of-the-way place and are set free. Rattlers, however, end up pickled in alcohol or become utilitarian, a snakeskin belt, for instance.

A snake serves some useful purposes—for example, it feasts on rodents. You shouldn't fear them in high grass. (Medium high grass is something else again.)

The Point Mugu area is fairly free of mosquitoes and flies, thanks to pest control. According to the PCs, the best way to get rid of pesky mosquitoes is to use minnows, which just love to dine on mosquito larva, usually found in still water.

Rats, mice, gophers and squirrels are a mixed bag which share some of man's likes—rats and mice love to eat grain in people's houses; ground squirrels and gophers take to the golf links whenever they can (they tunnel under golf courses and runways). Cockroaches just sponge off people, especially people who leave food lying about. Spiders eat insects, so they're not all that bad, except the shiny black one with an orange hourglass on its back. If you spot that one, run—she's a black widow. Seems she likes warm places, especially boiler rooms.

Navy pest controllers must pass a licensing exam, and be relicensed every two years. If you hate needles, find another profession. They have to take blood tests every six months, along with annual physicals. Either way pest controllers get stung.

The All Hands Staff

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

ORIGINAL ARTICLES and information of general interest may be forwarded addressed to the Editor, ALL HANDS, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, 2221 Jefferson Davis Highway, Washington, D. C. 20360.

DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for each five naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.

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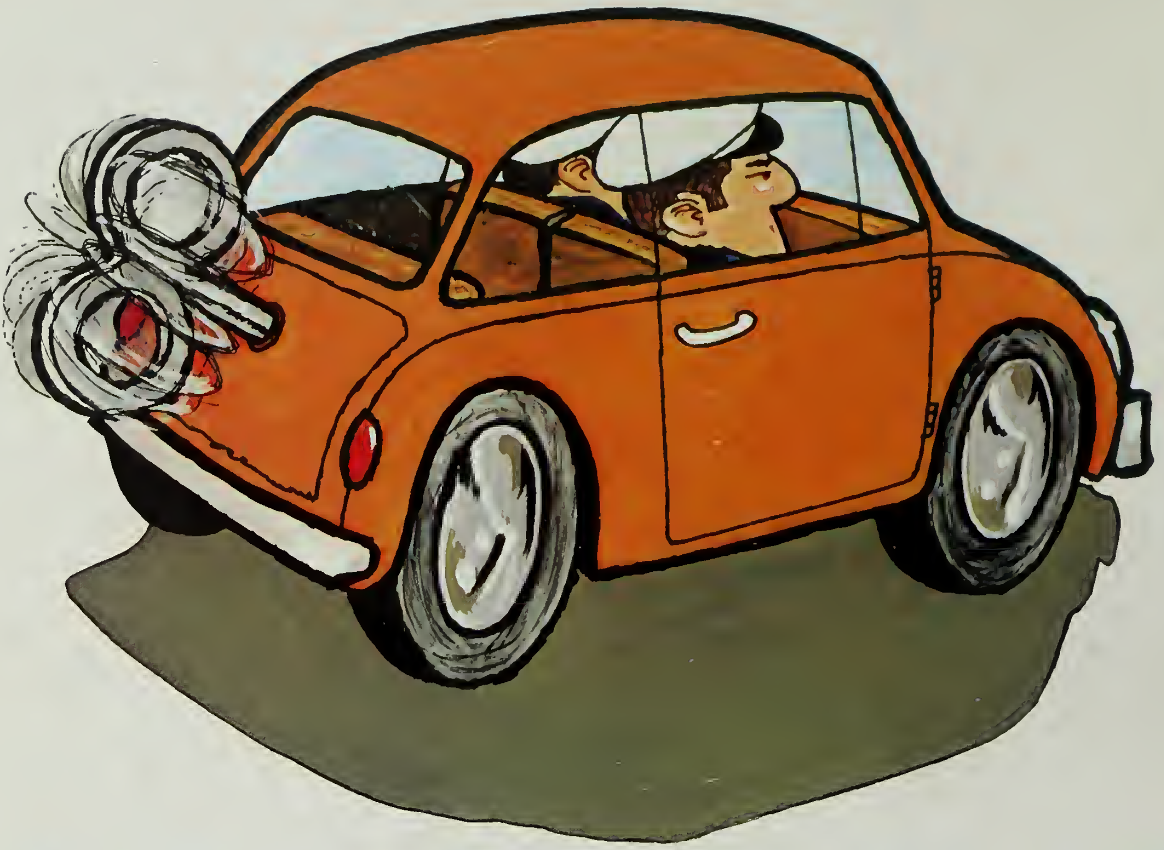
Right: A young sailor prepares to fire the shot line as his ship nears pier.



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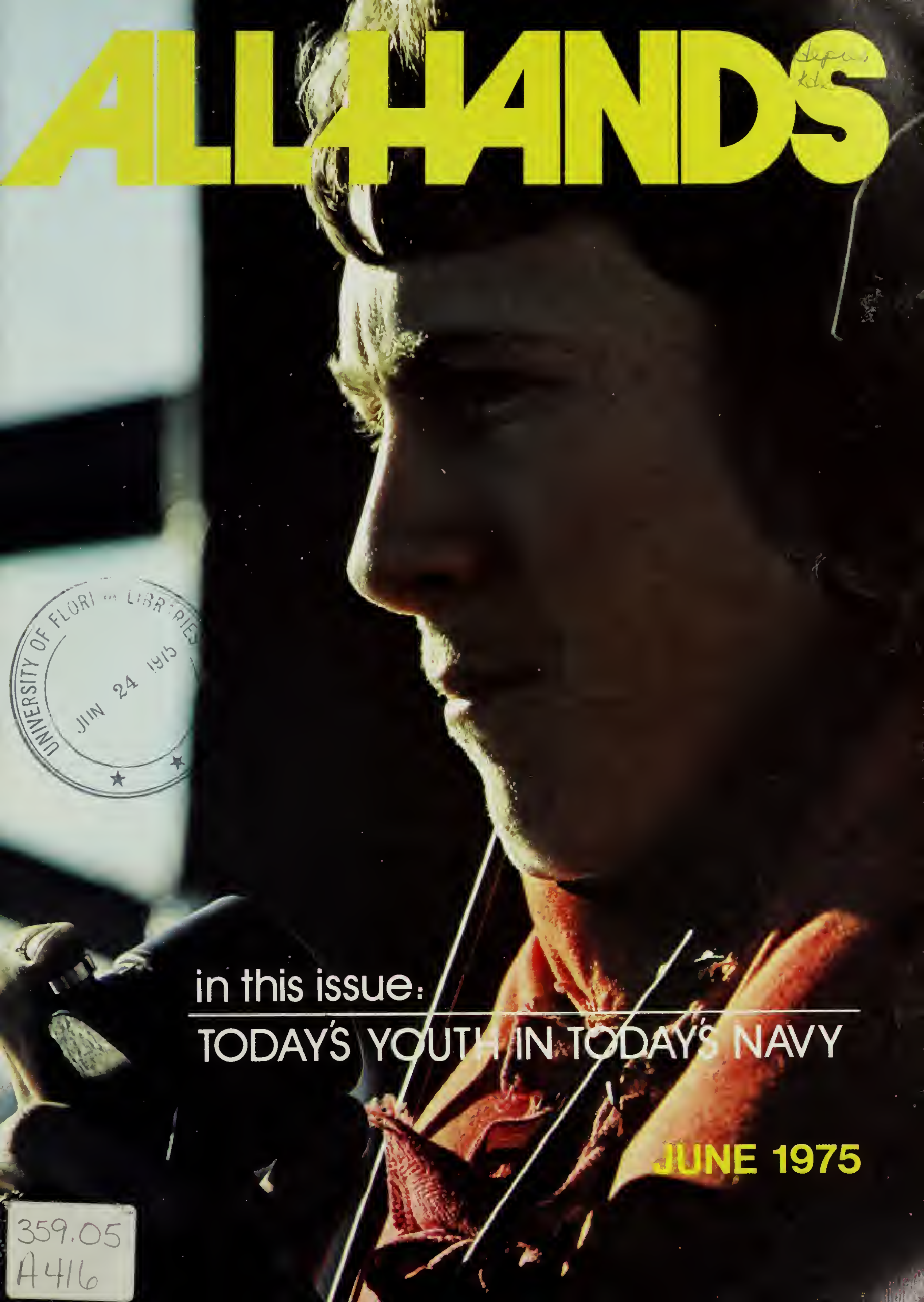

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TODAY'S YOUTH IN TODAY'S NAVY

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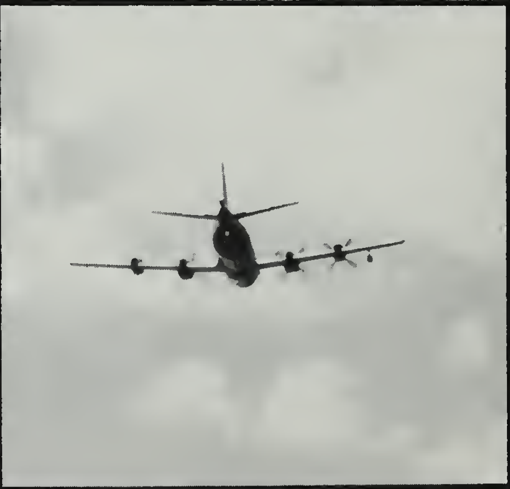
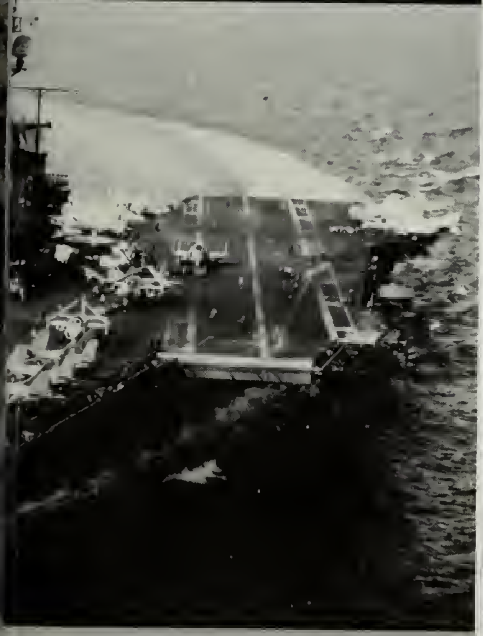
‘A REAFFIRMATION OF FREEDOM OF THE SEAS’

The Rescue of SS Mayaguez and her Crew

> “I wish to express my deep appreciation and that of the entire nation to the units and the men who participated in these operations for their valor and for their sacrifice.”
>
> President
> Gerald Ford
> 15 May 1975



A TEAM OPERATION: Acting with bold preci sion, Marines and Marine helicopters, Nav ships, planes and their crews, along with Ai Force aircraft, successfully carried out a res cue mission of the American merchant shi and her entire crew, who had been illegall seized by Cambodia. Shown here are som



of the Navy/Marine units that performed important roles. Left to right, top row: USS Henry B. Wilson (DDG 7), the United States Marines; second row: A-7 Corsairs, copter operations USS Harold E. Holt (DE 1074); third row: P-3 Orion aircraft, USS Coral Sea (CVA 43); at left: USS VEGA (AF 59).

ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

JUNE 1975 NUMBER 701

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FRONT COVER: In the era of the all-volunteer force, the Navy aims at both quality and quantity in maintaining personnel strength. For coverage on today's youth in today's Navy, turn to page 44. Photo by PH2 Gerald Leidy.

BACK COVER: Continuing the theme of today's youth in today's Navy, PH2 Rene Bidez captures the pride and anticipation in the face of Seaman Howard Johnson, one of the men graduating from Company 361, RTC, Orlando.

TODAY'S SAILORS in today's navy

Hundreds of wives, mothers and friends stood on the pier waiting for the ship to tie up after returning from a long overseas deployment. In the midst of the waving, shouting and joyful reunions, one young wife stood watching as the crew filed ashore over the gangway. As her husband reached her, she remarked, "I can't get over it—they all look so young!"

That was an accurate observation, for if you add up the ages of all enlisted Navy members and divide by the total you will come up with an average age of 25 years. If the onlooker at the pier could check the service jacket of each man who came down the gangway, he would discover that the young enlisted "prototype" would have a little over six years of active service, probably be married, and that he (or she) joined the Navy when slightly more than 18 years old, shortly after graduating from high school.

But in a world where real "job responsibility" normally comes only after years of apprenticeship, the whole picture would be even more astonishing. It emerges to tell the story of young men and women (many of whom are much less than the average 25) doing important, intricate, and often dangerous jobs, under challenging and difficult conditions. To the uninitiated, it is even more amazing that they do these jobs with a combination of dedication and griping—in traditional sailor fashion. But, just as those who preceded them, today's sailors get the job done.

Take, for example, a man who works on the flight deck of a carrier. At the age of 20, often younger, he is handling equipment worth millions of dollars. He faces a routine 12-15-hour day of air operations, including dozens of landings, launches and continuous spotting and re-spotting of aircraft on deck. He must be competent, careful, and agile—if not, his chances of being seriously injured become very real, especially during night operations. A submariner goes to sea and stays submerged for weeks at a time. The deckhand on a fleet oiler works among flailing fuel rigs, hoist cables and cargo booms. The destroyer sailor during gunnery exercises handles live explosives and powerful weapons. Take all these Navy people and place the time element of their jobs in the middle of a dark night, with a raging storm at sea, and the full picture comes through.

The role of the Navy woman can be equally challenging, as demonstrated in the sampling that appears on the following pages and elsewhere in this issue. As the Chief of Naval Operations has stated (ALL HANDS, Dec 1975, p. 2), both the overall numbers and the percentage of women in the Navy are increasing significantly. The number of enlisted women in the Navy is expected to double over a two-year period by the end of fiscal 1975.

The jobs of enlisted men and women featured in the following pages are varied, demanding and challenging. What makes them rise to the occasion? Perhaps it is because of a recruiting selection process which stresses quality. Perhaps it is in part because of the training and discipline received in boot camp and in the Fleet. Perhaps it is because of the feeling of pride in being part of the Navy team. Perhaps it is because of the very reasons why a man or woman joins the Navy in the first place.

According to the Navy Recruiting Command, there are at least 10 reasons why a person volunteers for today's Navy:

- *Educational opportunities:* the chance to receive professional and vocational training—to learn a trade or receive an advanced education of the highest degree.
- *Personal growth,* increased responsibilities—to reach demanding leadership/management positions at an early age.
- *Travel, adventure and new experiences* are a top appeal for many. "Joining the Navy to see the world" is still a major factor.
- *Opportunities* for success and promotional opportunities for those with the aptitude, desire and motivation—job satisfaction which means, essentially, accepting demanding challenges and meeting them.
- *To build lasting friendships,* afloat and ashore, and to work as an integral part of the team.
- *The lure of the sea*—many young Americans are still attracted to a life at sea.
- *Job security and being a part of the Navy family.* Many simply like the military way of life, its feeling of security and camaraderie, plus all the benefits unique to military service personnel.
- *Some simply want to "find themselves."* They're unsure of future career objectives, and the Navy offers all of the above, while a young person sorts out where he or she is going in life.
- *Self-esteem*—knowing that in today's Navy it truly takes "Someone Special" to become a member of the team—a sense of worth and pride in accomplishment.
- *Military pay*—it has been brought up to a more competitive level with the civilian labor market; therefore, the incentive of a good-paying job with security for the future is quite appealing today.

In the end, it is probably a combination of all these possibilities that leads a person to choose the Sea Service as a career. Thus, while today's new recruits enter the Navy for a variety of reasons, they all possess a commonality—dedication, motivation and they are all true volunteers.

How is the Navy doing in the era of the All-Volunteer Force? Results to date prove the all-volunteer Navy is working.

At a recent change of command ceremony Vice Admiral Emmett H. Tidd turned over the helm of the Navy Recruiting Command, after a three-year tour, to Rear Admiral Robert B. McClinton.

Vice Admiral Tidd, who led Navy recruiting through the transition to the All-Volunteer Force, noted, "For the youth who seek early responsibility and a share of the constructive things in our society, they can find it in today's Navy."

At the end of the first full "no-draft" fiscal year which ended last June, Navy attained 103 per cent of its basic recruiting goal. Since then increased emphasis has been put on quality recruiting and for the first nine months of this fiscal year Navy has achieved 101 per cent of its total goal with a steady rise in percentage of high school graduates and those eligible to attend Class "A" schools.

—JO1 Tom Jansing

THE JOBS THEY DO

- LITHOGRAPHER
- PATTERNMAKER
- AIR CONTROLMAN
- AVIATION STRUCTURAL MECHANIC
- YEOMAN
- MESS MANAGEMENT SPECIALIST
- RECRUITER
- SONAR TECHNICIAN
- AVIATION MACHINIST'S MATE STRIKER
- HOSPITAL CORPSMAN

LITHOGRAPHER

Bobby Webster

"They asked me what I wanted to be if I couldn't be a lithographer, and I told them I'd wait until a job in this field opened up."

That's what Seaman Bobby Webster, serving aboard USS *Okinawa* (LPH 3), told his counselor when asked about his Navy occupation. He made his point, because he now works in this amphibious assault ship's print shop. He's aspired to be a printer since his civilian days.

"I knew some printers back home and after touring the printing plants of the Winston-Salem, N. C., *Journal-Sentinel* and Kernersville, N. C., *News*, I was sold on the trade," explained Webster.

Webster's father, a World War II Navyman, influenced his son's decision about joining the Navy. He added, "I also wanted to do some traveling."

And travel he has. After taking recruit training in Orlando, Fla., Webster reported to the San Diego-based *Okinawa* at the Subic Bay U. S. Naval Base in the Republic of the Philippines.

He is now serving his third tour of duty with the U. S. Seventh Fleet in the Western Pacific. Although he's traveled throughout the area, Webster says the Philippines is his favorite Western Pacific country.

"There's so much to do there when you're off duty—horseback riding, go-carting, snorkeling, water-skiing, skeet shooting—and so much more. And that's just on the base. Off base, I enjoy going to the local beaches.

On duty, he's happy about his job and his future. "When I joined the Navy, I was told the lithographer rating was full, so I reported to *Okinawa* in December 1972 as a nondesignated seaman. I worked in the deck department for six months and in the galley three months," said Webster.

The deck department required hard and often dirty work, but Webster enjoyed it. Then two jobs opened up in the print shop and he requested to work there.

"The shop has one press, a chain-delivery offset printer," explained Webster, who gained most of his printing knowledge on the job.

"I enjoy printing because it presents the opportunity to be creative," he said. "And aboard *Okinawa*, the print shop is pretty independent."

Webster explained his shop prints daily bulletins, brochures, port information guides and other Navy material. "We can also print in color. Why, we have just about every color in the rainbow," claims Webster, enthusiastically pulling out examples of the shop's work.

He hopes one day to start a graphic arts business. With his determination, that hope is almost reality.

—JO1 Paul Long

PATTERNMAKER

Thomas Rorrison

Some people might not think that table-saws, lathes, mortising equipment and drill presses are tools of creative art. One Navyman, however, definitely believes they are. He is Chief Patternmaker Thomas Rorrison, who is in charge of the patternmakers' shop aboard the destroyer tender USS *Prairie* (AD 15), homeported in San Diego, Calif.

Amid the noise of grinding machines, PMC Rorrison pushed back his sawdust-flecked goggles and uncoiled from his drawing board to discuss his role as patternmaker, carpenter and Navy artist. "Patternmaking is definitely an art," the 38-year-old chief said. "It takes both skill and creative ability to plan, design, draw and carve a good pattern for the foundry."

The sandy-haired Rorrison, with a tanned face and a smile that hints at appreciation of good jokes, has been a patternmaker for almost 20 years. He joined the Navy in the post-Korean conflict days of 1955. For the past two years, he has been in charge of the 15-man shop aboard USS *Prairie.*

"Today's ships are sturdier and better equipped than when I joined the Navy," he said. "Not as many replacement parts and repairs seem to be necessary. The bulk of our work is in overseas areas where we function as a repair facility afloat."

The chief explained that when a part breaks on a ship located in Japan, it saves both time and transportation costs to have it repaired or remade on the tender, rather than having it sent to a stateside shore facility. He estimated that getting a part through a supplier in the States would take up to four months, depending on whether or not the part was in stock. "On older ships, many of the parts must be remade from scratch," he said. "In our shop, the average time for making a new part is two or three weeks, depending on how complicated it is."

When a job order comes to *Prairie,* it first goes to the engineering officer. From there, it is taken to the individuals concerned with the particular part and they check to see if it is in stock, or if it needs to be made. "If the part is to be cast," Rorrison explained, "the broken part or sketch is brought to us. It takes a combination of art and craftsmanship to take someone's idea and put it into wood, or the various other materials we work with."

On top of the chief's drawing board was a broken gear for watertight doors labeled "hatch gear." "We will draw this part full scale on a block of wood, then cut it out by machine and send the modeled part to the foundry to be cast in metal. The rough metal casting will be sent to the machine shop for the finishing steps."

Patterns can be modeled from different materials. The most common are wood, plaster, wire, metal, wax and plastics. "Wood is the most often used and the most economical," the Navy chief said. "Plaster costs less initially, but it breaks easily and causes longer manhours per job."

Rorrison prides himself on the fact that no one under his supervision has ever lost a limb or finger in the shop's machines. "I harp on safety," he said. "As soon as a person loses respect for a machine, that machine will bite him!"

The patternmaker rating is one of the smallest in the Navy. "There are only 140 of us altogether," Rorrison said. "I'm happy to be one of them . . . I really enjoy my job."

—Story by JOSN Betty Pease
—Photos by JO2 James Jones

AIR CONTROLMAN

Reginold Taylor

"I like my job. I like working with people. The money situation is getting better as is the whole outlook on the Navy."

His friends call him "T" but professionally he is Air Controlman 1st Class Reginold Taylor. He represents another facet of the career service—as seen by a Navyman in his mid-thirties. His job is a varied and challenging one—last year he was guiding pilots to a safe landing at the Naval Air Station Cubi Point, R. P. Right now he is on duty with the wintering over party in Antarctica, not far from the South Pole.

Taylor enjoys his Navy career. But the path leading to it wasn't always easy.

Tall, lanky and full of laughs, "T" grinned as he talked about growing up in Chicago. "I had to fight my way to the store and fight my way back," he chuckled. Taylor graduated from Tilden Technical High School in 1957 and then attended the University of Illinois at Urbana-Champaign. He dropped out after a semester.

"I had a job for a while but wasn't making much money," he explained. It wasn't the greatest job around and he ran into a dead end when looking for a better one.

"So I said, 'Well I'll go ahead and join the Navy and maybe I'll make out with something there.' " And he did.

Petty Officer Taylor was selected NAS Cubi Point Senior Enlisted Man-of-the-Quarter for July through September of 1973. But it took some hard lessons and a real effort to get there.

"The first years in the Navy I was like many young men," he recalled. "I had made third class petty officer. I was doing my thing so I was happy as a third class," he said.

But "T" began to run into problems with advancement—that's when he decided he had better "square away."

"Well, I made second class and from that time on I have been doing nothing but studying. I gave up partying and have been more concerned with my job and the people around me. I have put forth an effort—more of an effort than I did before—and I kind of like it!"

Taylor says of his job, "It's a challenge; nothing's ever the same. You have to be ahead of the situation because if you fall behind, you put yourself in a fix."

His assignments have ranged from guiding men and their planes (his "real thing") to the job of training petty officers. His duty billets have taken him to many locations—perhaps the most unusual of which is his assignment in Antarctica. But, in addition, he's a certified tower operator, qualified to operate the surveillance and precision approach (GCA) radarscopes.

Petty Officer 1st Class Taylor said he plans to make at least a 20-year career of the Navy. "Its people programs are improving. It's putting emphasis on the man and not the machine—like what makes him tick? Why does he do what he does? The Navy is telling its leaders to know their men. Navy people are becoming more aware."

Taylor's real concern is people. This concern is also reflected in his answer to a question asking what he believes in most. He replied, "People working together—harmony." That's Reginold Taylor.

—JO3 Bob L. Matheson

AVIATION STRUCTURAL MECHANIC

"Her work is equal to any man's in this division—she can 'buck a rivet' in a minute." That's how Senior Chief Aviation Structural Mechanic Dave Thomas describes his only, and the Navy's, lady "tinbender," or as she prefers, "bubblechaser," Aviation Structural Mechanic 3rd Class Diana (Dee Dee) Louise Lowe.

Stationed at the National Parachute Test Range, NAF, El Centro, Calif., Dee Dee enlisted in the Navy in July 1972. She was among the first group of women to go through basic training at Orlando.

When asked why she chose the Navy and became a metalsmith, Dee Dee replied, "I guess it was because when I was eight years old I was attracted by a billboard in my hometown of Hot Springs, S. D. This poster had a picture of a sailor and a small boy and read, 'Join the Navy.' " Dee Dee said she chose to become a "bubblechaser" primarily because she wanted to fly as a crewmember, and being a metalsmith would afford her that opportunity.

The path of becoming a metalsmith was not easy for

Diana Louise Lowe

Diana. She has not attended AMH "A" School. All her training thus far has consisted of on-the-job experience. It tooks months to persuade the right people to let her become a "tinbender." "It was a fight to get here, but definitely was worth it," says Dee Dee.

A believer in equal rights, Diana feels it is necessary to fit in with the men. "I don't expect them to change their habits because of me," she says. "After all, I'm a woman attempting to make a go of it in a man's environment." Although she admittedly can't do some jobs the men perform, like lifting heavy A-3D aircraft tires, Dee Dee tries to make up for it by working hard. This is why one will often find her long brown hair a bit disheveled and her face and hands grease-stained.

According to Dee Dee, the highlight of her new naval career was when she received her aircrew wings. "I'm very proud of them," she said. Diana qualified for her wings in the SH-3 helicopter; over a period of eight months, she accumulated 125 hours' flight time.

—Story & photos by PHC Ken George

YEOMAN

Richard A. Spon

Naval forms such as NavCompt 3065 or such titles as EPDOPAC, PAMIPAC and BuPers may seem mysterious secret codes to some. However, they and others are daily fare for Yeoman 1st Class Richard A. Spon of Patrol Squadron 22 in Hawaii.

They're not just daily routine to him—as he puts it, "I like my job."

Asked exactly what is his job in the squadron's admin department, he said, "Mostly it involves dealing with officers and their records. I handle all new receipts and transfers, which usually involves sitting down and talking with them and getting them properly installed in the squadron and in Hawaii.

"Of course, there are a whole bunch of other duties in the running of the squadron."

Doesn't all of that paperwork sometimes give him a headache? "Sometimes it's one of the most frustrating jobs in the Navy. We're also having trouble these days getting all of the things we need with which to function. That adds to the problems. But I guess a little 'flap' is good for everybody once in a while. It keeps us on our toes."

"Flap" control is one of the major parts of any yeoman's job, anticipating things before they happen. It entails specialized knowledge and training. Recently, Spon was involved in such training.

"I took a PAMIPAC (Personnel Accounting Machine Installation, Pacific) course which taught me all the various procedures involved in accounting for the personnel actually on board as compared to how many and of what designators we are allowed. It helps me a lot in my everyday work."

Apparently, Rick's love for his work carried over into the classroom—he received the highest marks in his class.

Before reporting to PatRon 22 last July, he was assigned to the Bureau of Naval Personnel in Washington, D. C. "I was working in the flag officer detailing office. We were responsible for detailing all the flag officers throughout the Navy."

Did he like being right in the middle of things? "I really enjoyed the people I worked with. I think that was one of the best parts of the job."

He was recently awarded the Navy Achievement Medal for his overall professional excellence and devotion to duty at the completion of his Washington tour.

What does he like about his present job? "I really like being a yeoman. There's a lot of variety in what we do, and we can have duty any place in the world. We're not a closed rate and we still have good advancement potential. It's great."

—Story and photos by PH3 William V. Breyfogle

SONAR TECHNICIAN

Richard J. Smith

Sonar Technician 1st Class Richard J. Smith admits it was draft pressure which brought him into the Navy almost 10 years ago. But something happened—he discovered that he liked Navy life.

Dick is a sonar technician aboard USS *L. Mendel Rivers* (SSN 686). It's the fourth boat under his belt.

"I started in diesel boats, in USS *Carp* out of Norfolk, and worked for a good 1st class who taught me the ropes. I was 2nd class before I ever saw the inside of a sonar school." He has since been aboard USS *Lapon* (SSN 661), his first nuclear boat, to sonar school at Key West, Fla., and then to USS *Jack* (SSN 605) out of New London, Conn.

In June 1973 he reported aboard as part of the precommissioning unit of *L. Mendel Rivers*, then under construction at Newport News, Va. That was good news for Dick and his wife, Melinda; Newport News was their home before he entered the service. *L. Mendel Rivers* is now homeported in Charleston, S. C.

"I'm really infatuated with sonar," said Dick. "It's a continuously changing job, with new equipment and new challenges.

"But there are other things too, which only a sonar tech can appreciate. I love to listen to porpoises and dolphin on the equipment. You could listen to them talking to each other for hours. Sometimes it gets irritating because it comes across as interference when you are trying to conduct operations, but otherwise, the sea is full of fascinating sounds. Shrimp click, like a man snapping his fingers. Other fish grunt. The carpenter fish sounds like a hammering of nails into wood. Whales emit a deep, low bellow, like a distant ship's horn—you don't hear many of them any more.

"Whales and porpoises are intelligent creatures. I often wonder if maybe they are trying to communicate with us. It gives you a strange feeling, when you think about it."

Being a submariner is the life Dick enjoys most. "Submarine people are a fine group of guys," he said. "They get along well; the education and morale are high; they're generally the cream of the crop. I like it. I'm content and I'm pretty well pleased to be a sonar tech and a submariner. Like any job, it has its ups and downs."

Pausing on that last statement for a moment, he said, "No, I didn't really mean to say it that way."

—Story by JOC Scott Hessek
—Photos by PH2 Karl Simon

RECRUITER

Charles Jackson

The sounds and smells of school greet you as you enter the building. Mingled with the scent of blackboard chalk are the voices of students clustered in the hallway.

There is a lull in the conversation as you pass and a pleasant greeting as you are recognized.

The "you" is Radioman 2nd Class Charles Jackson, a Navy recruiter and a familiar figure at James A. Garfield High School (he graduated from the Seattle, Wash., school in 1965). Since he became a Temporary Active Duty (TEMAC) recruiter for Navy Recruiting District, Seattle, he has spent many hours talking to high school and college students, and those already out of school, about the benefits of the Navy.

A TEMAC is normally a drilling Naval Reservist who is contracted for a certain period of active duty service. They are usually under contract for 150 days but may be signed on for longer periods.

"Recruiting is a challenging assignment," related Jackson, "that entails working long hours, which generally results in a great deal of personal satisfaction.

"You have the satisfaction of helping young people who are about to make a major decision about their lives. By enlisting them in the Navy, you are able to place them in a field which will provide training in skills which can be used in or out of the service."

Recruiter Jackson feels that he has an advantage over other recruiters. "I started off as a resident of Seattle, so I am already one step ahead of most—I know the area. Also, the number of contacts I make is really only limited by my imagination and ingenuity."

He has been assigned to the Seattle recruiting station since 1972. (The station has done well, making an overall 101.8 per cent thus far for fiscal 1975.)

Jackson was previously on active duty, from 1968 until 1972; before that he spent almost four years in the merchant marine. He feels that what helps him in his recruiting efforts is his ability to communicate his experiences in the Navy.

"When I talk to a prospect I don't pull any punches," stated the TEMAC recruiter, "because I don't believe in sugar-coating the Navy."

The young recruiter feels that the prospective recruit should understand that in the Navy "you have to work for what you get, which is as it should be."

Future plans for Jackson include changing his rate to Navy Counselor. There's a career in counseling, he knows, both within the service, and in a second career in retirement.

MESS MANAGEMENT SPECIALISTS

Glenn and Kathy Knight

Glenn Knight and his wife Kathy, both MS3s, are the "Knights of the Steam Table" at the Naval Amphibious Base (NAB), Little Creek, Va. Dressed in crisp white uniforms and traditional chefs' hats, they help prepare and serve three meals each day to nearly 800 hungry Navy people.

The husband-and-wife team—both mess management specialists 3rd class—share an unusual career in that they work together and are in each other's company days as well as evenings. Neither complains because the arrangement is perfectly adaptable to their one-car mode of transportation. Glenn and Kathy seldom get bored with each other since they go their separate ways on days off.

Glenn first became interested in cooking during a nine-month tour as a messcook when stationed on board ship. He prefers cooking at sea because, "They appreciate the food and can't go to a nearby pizza shop."

Kathy has always enjoyed cooking so her choosing it as a rating is not surprising. At home she does most of the cooking but Glenn likes to do the baking. He claims that he is the more accomplished of the two culinary artists and Kathy concedes that he is the best mess-maker by far.

The Knights are a professional team and make few mistakes at the steam table or the kettles. When there is a mistake, like the time Glenn left hotdogs in the steamer for nearly an hour and they shriveled up to one-third their original size, they have a solution. "The mistakes usually go unnoticed," they jokingly admit, "but when they are noticed, we just patch them up or say that it's a new dish."

—photos by PHAN Hickman
—Story by Karen Parkinson

AVIATION MACHINIST'S MATE

Robin J. Baker

"First woman to do this or that" stories are not unusual anymore—but, a woman airplane mechanic?

Robin J. Baker, a 20-year-old aviation machinist's mate airman, has an interesting job for either sex. Stationed at NAS Norfolk, she maintains and services one of the Helicopter Support Squadron Six (HC-6) choppers. It's not just a responsibility in name only; as a plane captain, Airman Baker must conduct inspections and keep an eye out for mechanical failures, oil leaks and equipment malfunctions that could endanger the copter or its crew. At the same time, Miss Baker is currently learning the intricacies of jet engine repair to boot!

While in flight, she assists the aircraft's pilots by taking charge of passengers and cargo, and operating the helo's personnel hoist and cargo hook.

Not everyone was in favor of her unconventional choice of ratings, so she had to work harder than most to win doubters over.

My hardest time was when I attended firefighting school," the airman recalled. "Two days in a row they drenched me with spray. I vowed to get even."

On the last day of class, Robin made good her promise. "I caught them all standing in a group and sprayed them down. After that they said I was one of them. That meant a lot to me."

Airman Baker has 40 of the required 100 flight hours needed to earn her golden aircrewman wings. Now her ambition is to deploy with one of the squadron's detachments.

From Norfolk, HC-6 sends helo detachments to sea aboard Navy ships on deployments which may last up to six months. Even though current Navy policy will not permit women to serve on board a combatant ship, Robin says she would love "to go cruising."

The no-women policy doesn't dampen her spirits at all. "I'm not trying to outdo the men, but I do think that women deserve equal opportunity. Besides, they said I would never be an aircrewman."

—Story and photos by PH2 R. G. Edmonson

HOSPITAL CORPSMAN

Don Dennis

After Don Dennis, stationed at Point Mugu, Calif., selected hospital corpsman as his basic Navy rating, he decided to move ahead along several paths in this broad field.

HM2 Dennis is now a qualified audiometric technician, intensive care corpsman, aviation medicine technician and general HM. Additionally, he is the senior Search and Rescue (SAR) HM at Point Mugu, and is a qualified independent duty HM.

"Most people don't realize what a corpsman really does unless they've seen one in a war situation or on independent duty," explained Dennis.

Dennis, age 22, flew medical evacuation missions in Vietnam while stationed aboard USS *Midway* (CVA 41). Now he continues to use that war training as the senior of six SAR corpsmen who fly rescue missions out of Pt. Mugu.

His regular job is conducting audiometric testing at the base dispensary. In conjunction with his daily work, he is trying to establish a hearing conservation program for all military personnel on base.

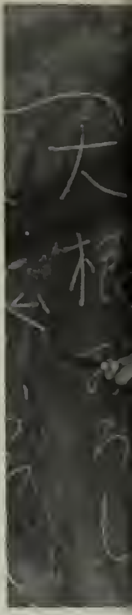
The program would be beneficial because periodic hearing examinations could be conducted to detect early stages of hearing loss. "Usually, people don't realize that they are losing their hearing until it's too late," explained Dennis. With many military personnel working in areas hazardous to hearing, the tests could act as an early warning." Dennis wants to test all personnel who work in hazardous areas to find out what condition their hearing is in; then he would follow up with annual retesting.

In addition to instituting the program, Dennis is hoping to be selected for the Navy's Physician's Assistant Warrant Officer Program.

Being involved in many station projects takes a lot of time but "I really enjoy the work," Dennis admits. He also believes that being an HM is something special—that is, a "not-everyone-can-do-it" special.

A SAILOR IN JAPAN

ET1 Roy E. Rhodes is making the most of his tour of duty in Yokosuka, by learning the language, customs and traditions of his Japanese hosts and by traveling through the country whenever possible.



Electronics Technician 1st Class Roy E. Rhodes is "a man on the go" in Yokosuka, Japan, where he is in charge of calibration and repair of electronic test equipment at the Naval Communication Station. A native of Cudahy, Calif., Rhodes has two-wheeled his way over more than 3000 miles on Japanese roads in the last year. About half this total travel by bicycle was accumulated while riding between work and home, a seven-mile round trip.

In addition to cycling, ET1 Rhodes spends time twice weekly in an aikido class which has earned him a fourth degree white belt. Other activities include lessons in brush painting, teaching English to Japanese and shogi (Japanese chess). Also crowding his busy schedule are Japanese language classes offered by an extension of the University of Maryland.

Living in a modest Japanese-style apartment 40 miles south of Tokyo, Rhodes has much in common with his Japanese neighbors. Determined to understand the Japanese people and to make friends with people his own age, he has set aside the majority of his pay check in a savings program and lives on an income close to that of his neighbors. Eating some meals in the base dining hall is really the only financial advantage Rhodes has over his Japanese peers.

Rhodes grew excited when talking about his education in Japanese culture. "I wouldn't trade my experiences during the past year for anything in the world," he said. "They've helped me to know myself better

and to understand other people."

Since few shipmates share ET1 Rhodes' opinion that a 400-mile bicycle ride is a pleasant way to spend a weekend, he normally takes such a trip with Japanese friends. Recently he rode to Hakone, a resort town about 50 miles up steep mountain passes from his home. After that, he pedaled 400 miles on a meandering trip to Mt. Fuji.

In August 1974, Rhodes made the 1000-mile trip from Yokosuka to Sasebo in 10 days. He took the train back, however, since he didn't have time for the return bike ride.

This is Rhodes' second tour of duty in Japan. From July 1968 to August 1970, he was assigned to the repair ship USS *Ajax*, then homeported in Sasebo. During that time, he lived as a boarder in a Japanese home. He learned some Japanese by playing with the family's five children and going places with them, but he wanted to understand more of the traditions and culture.

During his current tour, Rhodes has had the pleasure of attending a traditional Japanese wedding which he considers a highlight of his experiences. In discussing his current life-style, Rhodes said, "When I joined the Navy, I was very selfish and couldn't make friends. But now I make friends easily, and I've never been happier in my life."

—Story by JOSN Tim Carney, USN
—Photos by JOCS Ken Ledbetter, USN

THE IMPORTANCE OF COMMUNICATIONS IN MIDDLE MANAGEMENT

'THE CHIEFS GET TOGETHER'

The Chief of Naval Operations has said that the key to personnel problems in the Navy today involves personal contact among all in the chain of command, from the commander down to the petty officers.

Yesterday's professional Navyman might be surprised and impressed by the initiative shown in the area of "people communications" and the kind of programs being established Navywide and on a local command level to improve our personnel management. One such new idea in practice at the Headquarters, Naval District Washington, is a quarterly conference for all senior enlisted representatives from each command in the district.

In concept, the program calls for a meeting each calendar quarter of senior EMs, coinciding with a quarterly commanding officers' conference, which has been sponsored by the NDW commandant for some years.

The idea for the senior enlisteds to meet is new at NDW; the second conference was held 16 January at the Washington Navy Yard. Senior Chief Storekeeper Lee Keele, Senior Chief Petty Officer of the Command, introduced the concept for the face-to-face talk session

shortly after he assumed his post last summer.

SCPO Keele said that the aim of the conference is to make the senior EM at each command within the district a "communication base." What he hopes to see is the senior EM complete the communication cycle by receiving information and transmitting it to lower echelons within his unit. To complete the network, SCPO Keele says local responses must be fed back for evaluation.

The agenda for the conference provides each individual attending with a list of speakers addressing topics of primary importance to the enlisted man on active duty. Speakers are arranged to provide an opportunity to exchange ideas in some cases directly with officers responsible for ongoing policy changes throughout the Navy.

For example, at the most recent conference, senior EMs were included with district COs for the morning portion of their conference, hearing presentations by Captain H. E. Darton of the Navy Recruiting Command; Commander P. E. Hewitt, Commanding Officer, Navy Recruiting District Washington; and Vice Admiral R. L. J. Long, Deputy Chief of Naval Operations for Submarine Warfare.

The group then split into two separate conferences. Captain R. E. Poore, of the NEOCS Branch of BuPers, presented the latest developments in the NEOCS program. The effects of his section's recommendations possibly will result in the most significant changes in the enlisted rating structure in years.

Another topic of signal interest to the enlisted man is advancement. Lieutenant Commander H. E. Amerau Jr., also from BuPers, provided the latest data on changes in the enlisted advancement system. A spokesman for the Navy Campus for Achievement Program rounded out the day.

What it all means is that the reps attending these conferences are given the opportunity to hear firsthand background information and current directions of Navy policy. An opportunity for direct feedback, invaluable for the policymakers, is available for both parties.

In short, the communications gap is bridged in many cases, but perhaps more significantly, the cumulative years of leadership and practical experience pooled in the Navy's top EMs is tapped. Another positive aspect is that the senior EMs are brought into contact on a one-on-one basis, removing some of the anonymity in a far-flung command such as NDW. Reaffirming of the "teamwork" aspect is by no means an insignificant role of the conference.

SCPO Keele summed it up saying, "By taking the lead in communications, the senior enlisted rep accomplishes one of his major tasks—enhancing the Navy, as a career, to the junior enlisted man."

—Story & photos by JO1 Dan Slone

A Team Concept in OVERHAUL

When one of our ships goes in for overhaul today, financial considerations call for the ship's force to complete a great deal of the work package themselves. New skills are added to old skills. Men learn to tackle whatever jobs they have to, often working well outside their own ratings.

One way to accomplish the many and varied jobs encountered during a complex regular overhaul, as witnessed by the men of USS *Claude V. Ricketts* (DDG 5) during their overhaul in Norfolk Naval Shipyard, is to create a specialized team for each job concerned.

On *Ricketts*, such teams were created for all long-term work projects such as the installation of new modular bunks, the laying of new tiling throughout the ship, the cleaning and preservation of the main engineering spaces, the replacement of worn or damaged lagging, the correction of long and short stud problems and the painting of the numerous interior spaces.

Each team was made up of men from all ratings on the ship, each division doing its part for the overall effort.

With initial instruction and assistance from the Fleet Maintenance Assistance Group (FMAG), Naval Shipyard personnel or shipboard persons with the necessary experience, each team quickly learned its task and finished each job. It was far from uncommon to see sonar technicians at work in the boatswain's mates' compartment installing bunks, operations specialists and fire control technicians chipping and painting in the bilges under one of the firerooms, electronics technicians installing new tiling in the pilothouse, or boatswain's mates lagging supply compartment piping.

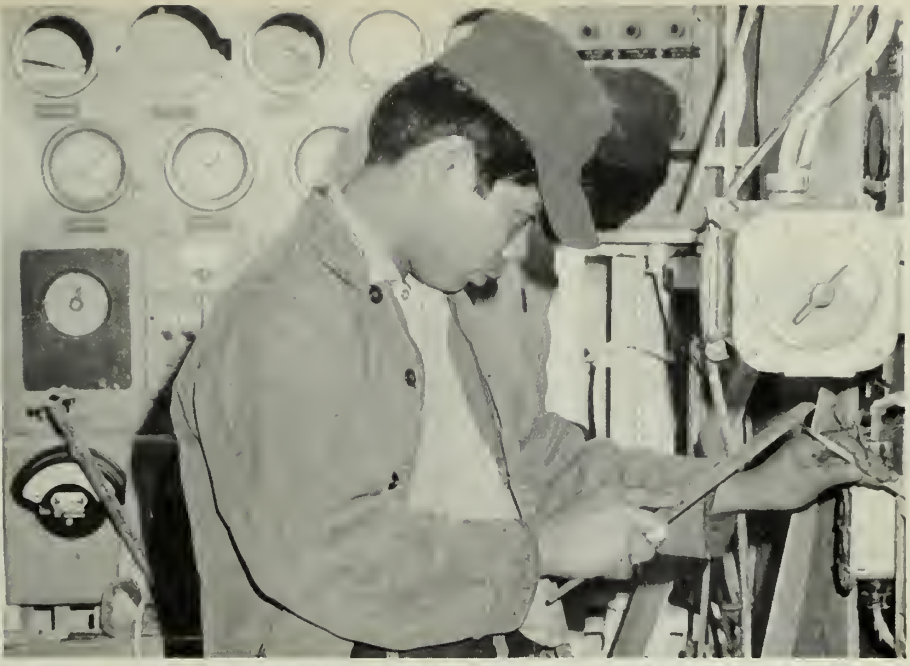
The team effort extended beyond these specific teams, however. Throughout any overhaul period of this sort all hands efforts are made to bring the overhaul to a successful completion or to meet specific critical dates. Propulsion Examining Board (PEB) requirements, post-repair trials for the machinery and weapons, equipment light-off, and other similar occasions all require a special emphasis from everyone aboard in order to complete those evolutions successfully. The mark of a highly successful overhaul is the meeting of these dates so that the ship can join the operational forces on time.

With the demands made on a ship's force during an overhaul period owing to the budgetary constraints facing the Navy today, nothing short of a team effort will lead to a successful overhaul. With fewer ships in the Navy, the importance of these overhauls to keep our ships in peak operating condition becomes more and more important.

Crewmen of USS Claude V. Ricketts (DDG 5) get it all together during a recent yard overhaul when specialized teams made up of men in all ratings on board were created to do all various work projects.

For the men of *Ricketts*, their teamwork paid off. The ship significantly improved its material readiness and habitability, passed the difficult PEB Light-Off Exam the first time, installed a new combat systems suit, made her post repair trials on time, and has rejoined the Fleet as a ready unit.

Teamwork works, and *Ricketts* men are proud of their contribution to a successful overhaul period.



'Doctors in this speciality to know each patient as an individual . . .'

FAMILY PHYSICIANS
for the Navy Family

"I wish we could see the same doctor every time we come here."

This has long been a familiar desire of patients visiting Navy medical facilities. The problem is now on its way to a solution with more family practice physicians being assigned to naval hospitals. It is expected that by the end of July, 90 of these specialists will be practicing in the Navy.

The Family Practice specialty was recognized in 1969 as medicine's 20th primary specialty, by the American Medical Association in response to public demand for more family doctors. According to the AMA, a family physician is one who practices in the discipline of family medicine, and whose training and experience qualify him to practice in several fields of medicine and surgery, with particular emphasis on the family unit.

In response to similar demands within the Navy, family practice clinics and services were begun at selected facilities.

Recognizing the value of practitioners in this specialty, family practice residency training programs were established at specific naval health facilities. There are four American Medical Association Council of Medical Education-approved family practice residency training programs at Navy Regional Medical Centers in Camp Pendleton, Calif., Charleston, S. C., Jacksonville, Fla., and Pensacola, Fla.

In their first year, residents in training are primarily concerned with hospital inpatient care. For one-half day each week, they care for specific families in the clinic. The remainder of their time is spent rotating through training in obstetrics, gynecology, medicine, pediatrics and surgery. From the beginning of their training and throughout each rotation they retain their identity as family practice residents.

Second and third year residents spend 50 per cent of their time in the clinic caring for specific families, and the other half gaining experience in the hospital and other specialties including psychiatry and preventive medicine. Residents are also required to rotate on night call so that they may become familiar with initial workup and management of emergency cases.

Family practice training stresses quality of care and personalized treatment. Doctors in this specialty are urged to learn as much as possible about each family as a unit, get to know each patient as an individual and view his medical problems as they affect him and the entire family.

Family practice clinics are set up like a private physician's who is engaged in a group practice. Doctors have individual offices adjacent to fully equipped examination rooms. This layout allows team members to work closely together in consultation, and residents to have already-trained family practice physicians close at hand. The facilities include large waiting rooms and areas where preliminary information such as blood pressure and temperatures can be taken by nurses or hospital corpsmen. Clinics also have a small laboratory where simple tests such as urinalysis and cultures can be made without having to send them to the main hospital lab. Waiting time is kept to a minimum by requiring appointments, but schedules allow for urgent and emergency cases to be taken immediately.

Since the success of the first clinic in Pensacola, family practice physicians have been assigned to naval hospitals at Cherry Point, N. C., and Whidbey Island, Wash., and to the Naval Regional Medical Center, Long Beach, Calif. In July another 12 are scheduled to be assigned to the Naval Hospital, Memphis, Millington, Tenn.

More family practice clinics and physicians are expected to follow in the near future so that Navy families can have improved continuity of care and comprehensive medical treatment.

The Naval Aerospace and Regional Medical Center family practice staff and clinic at Pensacola, Fla., one of many in an expanding program to improve Navy medical care.

NAVAL REGIONAL MEDICAL CENTER

▪▪▪YOKOSUKA

A surgeon needs some fast test results and an accident victim requires whole blood to save his life. A woman is worried about a suspicious-appearing lump.

These people have one thing in common, they and thousands of others in Japan depend on the Yokosuka Naval Regional Medical Center (NRMC) laboratory for help.

Pathologist Lieutenant Commander S. H. Myster (MC) and his staff of 13 hospital corpsmen are responsible for the operation of the lab in which nearly $100,000 worth of new equipment was just installed and which got an $86,000 face-lift in the bargain.

Dr. Myster said that the new equipment allows the lab to nearly double its test capacity to 30,000 tests per year. "Without these tests," he said, "NRMC doctors could not diagnose many diseases."

Some of the new equipment went into the lab's blood bank. With the newer and more reliable equipment, the lab has increased its ability to handle blood and blood components; NRMC now can keep up to 600 pints of whole blood for operations and emergencies. "Whole blood is vital in emergencies involving internal injuries," Dr. Myster said. "The coagulation factors of fresh blood can help heal injured tissue and stop bleeding."

Senior Chief Hospital Corpsman Gayle H. Damstrom, Dr. Myster's administrative assistant, pointed out that the remodeling job added to lab efficiency, too.

Facing page: HM1 Gary Snyder operates a CP-7 bio-data coagulation profiler. Above: HM1 William Krill takes a reading on the lab's new ZBI-6 machine for hematology counts. Right: HM3 David Morris prepares blood specimen for separation.

He said that the lab's technicians were now out of their "job cubbyholes" and into a spacious lab where cross-training and assistance are both readily available.

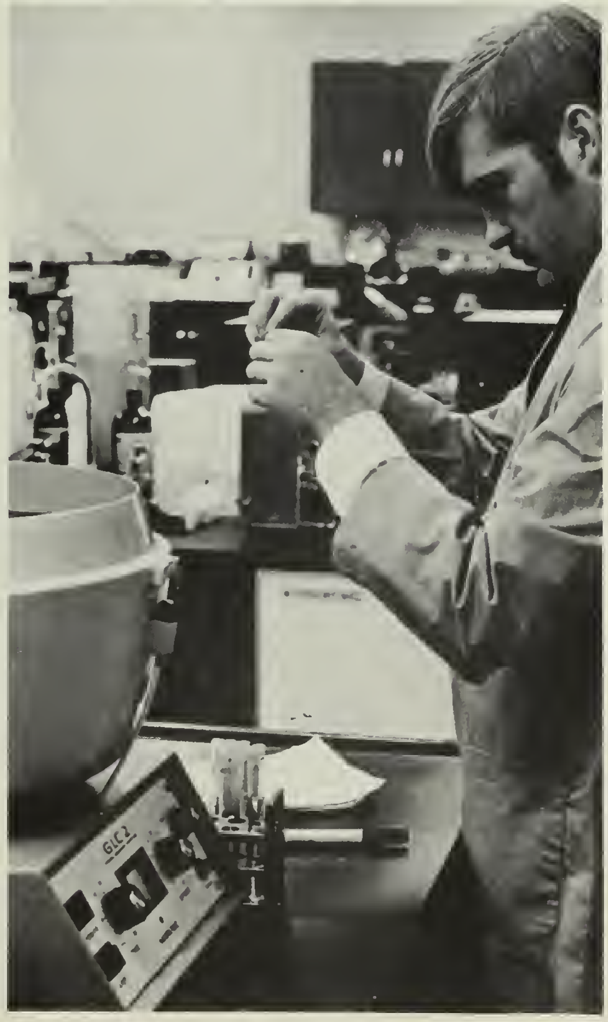
"If hemotology is swamped and biochemistry has a light workload," he said, "I can just look across the lab, see what's going on and reassign people. Under the old setup, with walls cutting people off from one another, I had to stop what I was doing to make a circuit of the lab every 30 minutes or so to make sure work was evenly distributed."

He also said that removing the walls added to floor space and made it possible to move equipment from one area to the other with little trouble. "If one section needs more room," he explained, "we just move another out of the way—working areas are virtually interchangeable."

Dr. Myster stressed that the $86,000 that went into the renovation was only for the materials. "The Navy saved some money by letting the Seabees do it as a training project," he said.

"Contract labor alone could have exceeded $100,000. This way, the Seabees were able to save that amount for us while gaining additional experience themselves. And the job they turned out is outstanding in all respects."

—Story by JO1 Bob Skinner
—Photos by JOSN Tim Carney



SHIP'S SURGEON

BY LAND OR BY SEA

TOP MEDICAL CARE

Aircraft carriers are communities of professionals. To operate the huge vessels requires a crew of technicians in many ratings, plus experts qualified in sailing the world's most modern ships, engineers, aviators, analysts, executives—and a highly trained medical team, including one surgeon. Representative of this last category is Lieutenant Commander Robert P. DerHagopian, the surgeon for USS *Midway* (CVA 41).

Working with two other doctors and a staff of 40 hospital corpsmen, the 30-year-old general surgeon shares responsibility of maintaining the health of *Midway's* 4000 crewmen. Each day an average of 100 patients with problems that range from personal health counseling to broken bones come to Dr. DerHagopian during sick call.

The requirements for a medical surgeon call for long years of study, training and experience, both general and specialized. Dr. DerHagopian's professional experience goes back to the School of Medicine at Tufts University, internship and residency at Boston City Hospital, and a year at Tufts-New England Medical Center in Boston as a resident general surgeon. A fellowship at the Veterans Administration Hospital in Boston came next, and there Dr. DerHagopian (called "Dr. D" by his corpsmen) participated in all aspects of kidney transplants, from work in an organ bank, to heading kidney transplant surgery teams.

He came aboard *Midway* in July 1974, from Tufts-New England Medical Center where he served as chief resident in surgery. A man who relishes the daily challenge of medicine, Dr. DerHagopian hasn't been disappointed by practice in a seagoing hospital. "It teaches a specialist how to handle a variety of medical problems," says the general surgeon.

In civilian practice or ashore, Dr. DerHagopian would handle only cases involving surgery. Aboard *Midway*, it's different. "Here I double as a general medical officer, which means I'm not just a surgeon, but a psychiatrist, dermatologist and general practitioner," he states.

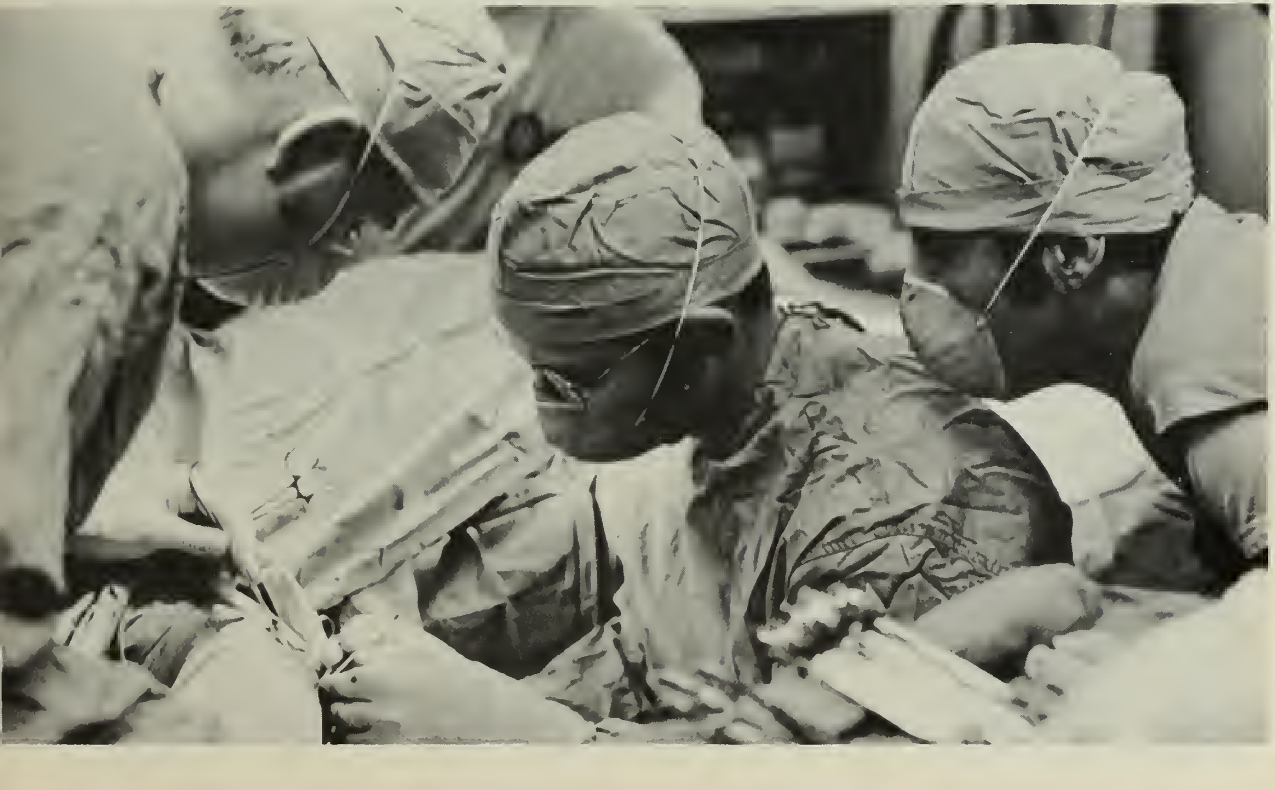
Another advantage of duty aboard ship is the unique

opportunity it affords to work with the at-sea Navy. "I'm very favorably impressed with the professionalism of people in the fleet, the job they have to do and the facilities they have to do it with," observes the doctor.

Like seafaring medical men of the past, Dr. Der-Hagopian finds that the confined quarters of a ship's sick bay call for some adjustment. "There isn't a lot of room and a great variety of equipment here as there is in a shore-based hospital," he says. "It's taught me to adapt, but it doesn't mean having to make any compromises at all. It's good medicine."

—Story & photos by JO3 W. D. Morris

Clockwise from top left: Dr. (LCDR) Robert P. Der Hagopian, ship's surgeon in USS Midway (CVA 41); dons surgical gloves before shipboard operation to set a crewman's broken arm; prepares injured crewman's arm for operation with assistance of HM1 Donald Nys; watches as Dr. (LCDR) R. L. Ray cleans wound; pauses during the operation to instruct an assistant.



15,800 Units Since 1970

FAMILY HOUSING

". . . Improved personnel living conditions: a key factor in career considerations and of prime importance in personnel retention . . ."

Little Creek

Left: Part of a 600-unit family housing construction program at the Naval Amphibious Base, Little Creek, Va., these three- and four-bedroom homes were built for Navy enlisted men and their families in the Norfolk area. Below: These contemporary duplex homes for enlisted personnel are a portion of the 150 units built at Great Lakes, Ill. Facing page top: These three- and four-bedroom homes were built for enlisted families on Oahu in Hawaii. Facing page bottom: These two-story town houses were built at Fort Adams for families of student officers attending Naval War College at Newport.

Great Lakes

With the establishment of the All-Volunteer Force, the Navy has taken an in-depth look at where it's been and where it's going in making the Navy an attractive career.

It was apparent that improved personnel living conditions, with emphasis on adequate family housing, was a key factor in career considerations and is of prime importance in personnel retention. The Naval Facilities Engineering Command (NFEC), as the service's design and construction administrator, has long considered family housing one of its most visual and vital programs.

The Navy has, since 1970, placed some 15,800 units under contract at various locations in the United States and overseas, at an estimated cost of $422 million. Family housing construction programs for fiscal years 1973 and 1974 were the Navy's largest, with some 6800 units scheduled for construction at an estimated cost of $200 million.

The fiscal year 1975 Military Construction Program appears to be the last major year for housing construction; authorizations will taper off in the next several years. Upon completion of the 1978 program the Navy and Marine Corps will have some 92,775 public quarters and 13, 361 rental units in their housing inventory. This is sufficient to assure, with community support, availability of adequate housing for all eligible Navy personnel.

With drastic reduction in new housing construction, future emphasis will be on improving existing units by making alterations as needed, and installing new kitchen and mechanical equipment. Existing serviceable, but older, dwelling units will therefore be modernized and brought to the level of adequacy desired.

Most practical tool which the Navy has used to obtain good quality housing during the recent period of rapid inflation has been "Turnkey," a one-step negotiated procurement procedure. Recognizing that the expertise of the housing industry could benefit the Navy in obtaining good housing at reasonable cost, the Navy led in development of "Turnkey" procurement procedures and considers the results of this method the major reason for current triservice success in executing their housing programs.

Currently, about 80 per cent of the services' family housing construction programs are scheduled to be acquired by this procurement method.

NFEC considered that through combined efforts of headquarters and their engineering field divisions, they have provided, within authorized dollars, the best housing possible for Navy and Marine Corps families throughout the world.

The accompanying photographs are representative of some housing units recently completed at various Navy and Marine Corps installations. These units are typical of those being built at all locations and are constructed of a quality comparable to similarly priced civilian housing being built in their geographical areas.

Construction of these houses and improvement of older existing units will provide a major incentive for present and future Navy and Marine Corps men and women to make the service their career.

—Yates P. Boswell

Hawaii

Newport

CDR KUHN MAKES HISTORY

* * *

Commander Lucille R. (Dixie) Kuhn will make history 1 July when she relieves Captain Julian C. Patrick as director of Naval Officer Candidate School at Naval Education and Training Center, Newport, R. I. She will become the first woman to direct OCS in its 24-year history and the first female to head an integrated basic officer training school in the U. S. Armed Forces.

Starting her career initially as (in her own words) a "clerk in an insurance company" CDR Kuhn decided she could do a lot better in the Navy. She joined up in 1949 as an enlisted radioman. A year later, she became the only woman supervisor of a radio watch section in the Fifth Naval District, Norfolk, Va. When the now-defunct seaman-to-admiral "integration" program let enlisted women compete for officer preparatory training, CDR Kuhn "jumped at the chance." She was the first woman chosen to attend the former Women Officers School in Newport in 1955.

The 47-year-old Washington, D. C., native who now calls Richmond, Va., home, vividly remembers her first job as an ensign. "I was assigned to the Bureau of Naval Personnel as a placement officer—for male officers (lieutenant commander and below) ordered to 120 different ships, the size of destroyers and smaller," she said.

She went to night school in her off-duty time for two years and later was the first woman ordered to college to earn an undergraduate degree through the old "5 Term" college program. She graduated with an A.B. in psychology from George Washington University in 1960.

Her diverse career continued, since the prospective captain never asked for a specific assignment. She served as security group detachment head and issuing officer at Newport Naval Communication Station and has been a woman officer programs recruiter as well. "I was always given the chance to do the job and show what I could do," she noted.

Perhaps one of her more challenging jobs was that of deputy director (research and administration) in the office of legislative affairs in Washington from 1972 to 1974. Among other duties there, she researched military legislation before the Congress for the Secretary of Defense.

CDR Kuhn noted that much has changed in officer preparatory training since she was last assigned to Newport in 1963. "People have changed," she says. "So, too, have roles women play in the Navy. Just as women today have increased job opportunities and responsibilities, they must exhibit matured mental outlooks. A logical mind is a great asset," she stressed.

"Additionally, women must be willing to do their best as professionals. Do not ask for special favors," she advises them, "but *do* appreciate them when they come."

CDR Kuhn plans no immediate changes in her new job. She has a primary goal for using staff members with experience she may lack (such as shipboard duty) as advisors. She will also strive for increased staff/student interaction, citing intial assignment counseling and company administration sessions as means to realize that end. (Speaking of sea duty, CDR Kuhn wonders if Americans are truly ready to send women to sea in combatant roles, and expresses no personal desire to go. If ordered to, however, she said she would.)

"I came into the Navy for a job that had responsibility," says CDR Kuhn. And responsibility she has had, in her past assignments and has in her present one at OCS. In the past year, OCS commissioned 1000 ensigns who went on to duty ranging from the CEC and Supply Corps to the nuclear power program.

The soft-spoken member of a family whose historical ties are with the Light Infantry Blues of Richmond, Va., continues to prepare not only for this job but for her next job. Of her current assignment she says, "There are not very many places where you have a direct hand in shaping careers of future officers. This has to be one of the most challenging and rewarding roles in the Navy," she concluded.

—Story by ENS Char Jensen, USNR
—Top Photo by Ray Botelho

* * * * * *

L R KUHN
ASST DIRNCOS

Queries from the Officer Corps

Questions and Answers

Assignments/Detailing

Q. *In dealing with BuPers, I become confused with the terms assignment officer, placement officer and detailer. What are the functions of each and how are they related?*

A. The terms assignment officer and detailer are just different names for the same person. The assignment officer handles the people side of the distribution process. He is responsible for the individual officer, that is, to find the assignment that best fits his abilities, desires and career pattern.

The placement officer is responsible for the commands he represents. It is his task to obtain the most qualified officer available to fill a billet requirement in an activity. To do this the placement officer contacts the assignment officer and provides him with a billet description and information on the kind of officer needed; the assignment officer then identifies his candidate for the billet. The placement officer reviews the candidate's record and, if he concurs, approves him for the activity. If not approved, the process is repeated until a qualified candidate is obtained.

Q. *Regarding a future assignment in my subspecialty (computer), which office in BuPers is my point of contact?*

A. Your primary point of contact remains your assignment officer (detailer). You should continue to forward your duty choices on the standard Officer Duty Preference Card (NavPers 1301/1).

Ideally, you will be programmed for your next subspecialty assignment during a process involving three offices: your assignment office, the subspecialty community manager, and the appropriate placement desk. Your detailer represents your personal interests and is aware of your general career needs. He will normally advise you of other points of contact who can assist you or who can provide technical advice that you might require.

Q. *I am a cryptologic officer and want to know how far in advance of my PRD I should contact my detailer to discuss my next assignment.*

A. Because of the nature of cryptologic detailing, a 161X/646X/764X officer is looked at for a specific assignment about nine months prior to his PRD. The nine-month point is a good time to call the cryptologic detailer because he will have a good idea of what will be available and will have looked, or will be about to look, at your record to make a tentative assignment on a fairly firm slate.

Q. *I am a 1635 Ready Reserve LCDR currently drilling with a Reserve intelligence unit. May I come back on active duty if I request recall to active duty?*

A. BuPers receives numerous queries from Ready Reserve intelligence officers (1635-R) desiring recall to permanent active duty within the intelligence community. Unfortunately BuPers must reply negatively each time. Congressional action requiring officer end strength reductions has precluded recalling anyone to permanent active duty within the intelligence community for several years.

Q. *Are enlisted personnel enrolled in the NESEP Program eligible for direct commissions in the restricted line and staff corps?*

A. Up to five per cent of NESEP graduates may be commissioned in the restricted line and staff corps provided they possess a baccalaureate degree and enlisted experience associated with the desired specialty or corps.

Q. *What is the purpose of the Weapon System Acquisition Managers (WSAM) Program and who is eligible to apply for WSAM designation?*

A. The WSAM Program was established in 1972 as a means of developing a cadre of well qualified officers to serve as project managers for the acquisition of new major weapon systems for the Navy. WSAM officers in the LCDR through CAPT ranks will be considered for WSAM-related billets each time they rotate to shore duty in order to round out their experience and qualifications.

All URL/RL/staff officers in the ranks of LCDR, CDR and CAPT are eligible to apply for WSAM designation. The selection board to select WSAM officers generally looks for postgraduate education in a technical, financial or management field and an excellent record of performance in all previous assignments.

Q. *Is there a place in the Navy for officers with engineering and science masters' education?*

A. Yes, there are over 3000 billets that require such education for minimum satisfactory performance in those jobs. See NavPers 15993 for a detailed listing.

Subspecialties

Q. *How do I receive a subspecialty code and who assigns these codes?*

A. The "D" or "P" subspecialty codes are awarded to those officers who have a PhD or master's level education, respectively. Upon completion of education, a transcript must be submitted to BuPers for inclusion in your official record.

The "S" subspecialty code is awarded to those officers who satisfactorily complete a tour in a subspecialty coded billet and have not previously been coded in that subspecialty. The completion of the tour is noted by the assignment and placement officers and they in turn see that the coding takes place.

For those officers completing a tour in a non-subspecialty coded billet but who feel they have essentially been performing the same tasks, a request may be submitted to the Chief of Naval Personnel (Pers-403) for a record review and possible assignment of a subspecialty code.

Every two years, a subspecialty selection board meets not only to select Proven Subspecialists but also to review the D/P/S codes assigned to officers to determine validity.

Q. *What URL billets do I have to serve in to become a Proven Subspecialist under the Operational Technical Managerial System (OTMS)?*

A. Designation as a Proven Subspecialist is done by selection board action. The fundamental criterion used in selection is recent, relevant, superior performance, coupled with demonstrated "range and depth" of experience. Each subspecialty field has its own selection board (meeting about every two years) comprised of a URL flag officer and several captains who are recognized as top performers in that subspecialty.

Q. *Under the Operational Technical Managerial System (OTMS) Program, will I, as an 1100 woman officer, be required to stay in a subspecialty area once I have been assigned an "S," "P" or "D" code or designated a proven subspecialist?*

A. The major difference between the application of the OTMS concept to 1100 women officers and to officers with a warfare specialty is that there is no requirement for 1100 officers to rotate out of their subspecialty area for further development of the operational aspect of their careers. However, to ensure that women officers maintain viability as line officers, special efforts are underway in BuPers to formulate career patterns which are aimed at developing in them levels of experience and responsibility equivalent to those acquired by warfare specialists. With the latter in mind, three avenues of career progression are under consideration with regard to 1100 women officers; they are:

- Consecutive tours in one subspecialty area.
- Repeated, but not necessarily consecutive, tours in a subspecialty area.
- Repeated, but not necessarily consecutive, tours in more than one subspecialty area.

The avenue along which an individual's career progresses will be dependent upon the subspecialty area, Navy requirements and the individual's desires and professional needs. Regardless of the avenue traveled, 1100 women officers should seek assignments which provide them with increasing levels of responsibility and professional expertise.

Q. *What is (or was) the schedule for calendar year 1975 subspecialty selection boards?*

A.

Electronic engineering	6-10 Jan
Weapons system acquisition management	11-21 Feb
Environmental science	11-21 Feb
Ordnance engineering	22 Apr-2 May
Computer	28 Apr-2 May
Politico-military/strategic planning	3-13 Jun

Questions and Answers

Ship engineering	17-27 Jun
Operations analysis	30 Jun-3 Jul

Fiscal year 1976 boards have not yet been announced.

Q. *What is the best way to pursue intelligence as a subspecialty? I am a LTJG, 1160 designator, aboard a carrier.*

A. The best way for a junior URL officer to develop a subspecialty in intelligence is through postgraduate school. There are two different curricula available, the Defense Intelligence School in Washington ton, D. C., and the Naval Intelligence course at the Naval Postgraduate School. Upon successful completion of either course a URL officer is designated an intelligence subspecialist.

Another method is by experience in the field. Officers completing a full tour in an intelligence assignment normally are designated as intelligence subspecialists. Once designated, an officer can anticipate spending many of his nonoperational tours in the intelligence field.

Q. *What career opportunities exist for a submarine-qualified Strategic Weapons Officer?*

A. The Strategic Weapons Officer Program provides a challenging career for officers who wish to serve in the submarine service, but are not eligible for the Nuclear Power Program. The career path, following nine months of initial submarine and weapons training, consists of sea duty tours as assistant weapons officer, weapons officer and navigator aboard *Polaris*, *Poseidon* and *Trident* SSBNs interspersed with shore duty in strategic weapons technical, operational, and training assignments.

Although the program does not lead to command of a nuclear submarine, it is uniquely suited to the Navy's Operational Technical Managerial System (OTMS) in that it provides an officer ample opportunity to develop and demonstrate his seagoing skills as well as a full opportunity to develop either a technical or managerial subspecialty and become a Proven Subspecialist. Qualified officers desiring to specialize further in engineering related areas may apply for change of designator to EDO. The Chief of Naval Personnel has recently approved a new concept for up to 20 Strategic Weapons Officers to shift annually to EDO as strategic weapons specialists at the post department head level. These officers may serve in both submarine force billets as well as traditional EDO billets.

Today, Strategic Weapons Officers are assigned to submarine force staffs and schools, JCS, OpNav, the Joint Strategic Target Planning Staff, the Strategic Systems Project Office, naval shipyards and Ocean Systems NavFacs.

The Strategic Weapons Officer's career path is flexible in that an individual aspiring to command rather than to a more technical subspecialty may direct his career to attain command. Officers desiring submarine-related commands may strive for command of one of the remaining diesel submarines, an ASR or a submarine force support ship. A few outstanding Strategic Weapons Officers may pursue surface command by requesting change of designator and surface assignment.

Education

Q. *Can I get a Naval War College Degree through nontraditional means?*

A. *Yes, there is an extension course offered at night in the Washington, D. C., area, and a complete correspondence course package offered by the Naval War College. For further information, call A/V 222-4636.*

Q. *What is the difference between a principal and alternate selectee for a postgraduate curriculum?*

A. Each year, input quotas are established for all the Navy's postgraduate education courses. The quotas are filled by officers selected as principal or alternate candidates by a postgraduate selection board. A principal candidate is an officer whose academic background and professional performance are such that he is capable of direct input into a course for which he is selected. A principal selectee remains eligible (in the bank of selectees) for orders to PG school for three years.

An alternate selectee is an officer who, like a principal, has a strong performance record, but whose academic background may allow direct input into the course for which he has been selected or, in the technical fields, the engineering science preparatory course could be required. The necessity for the preparatory course is determined by the detailer and student placement officer upon review of the selectee's academic record and the course entrance requirements. An alternate selectee's eligibility is one year and his record will automatically be reviewed by the subsequent FY PG selection board.

Q. *I have been selected by the FY 76 postgraduate selection board as a triple "X" (XXX) candidate. What is the XXX Program and what am I eligible for as an XXX selectee?*

A. The XXX Program, established in 1965, is composed of URL, 14XX and 15XX officers who are selected by a postgraduate selection board for graduate level education. The selection board deems XXX selectees qualified both professionally and academically to pursue graduate level education in a technical area.

A junior officer is considered for XXX when: (a) he has not indicated a PG curricula choice, or has indicated "PG school not desired" on the officer preference card, or (b) he is nonselected for his PG preferences but his credentials qualify him for PG training in a technical field, either as a direct input or via the engineering science preparatory course at NPS. Once selected to XXX, an officer remains eligible for orders to PG school until the end of the fiscal year for which selected.

There are some points to remember concerning XXX selectees:

- The XXX Program applies only to technical curricula.
- Eligibility lasts for one year with a selectee's record reviewed by the subsequent FY PG selection board, if he is not ordered to PG school.
- Assignment to PG school from XXX is contingent upon officer availability and course quotas as determined by the detailer and student placement officer.

Q. *My undergraduate degree is in a nontechnical field. Why was I selected for XXX?*

A. Historically, the number of top quality applicants for nontechnical graduate education reviewed by the postgraduate selection board greatly exceeds the quotas available for these curricula. Additionally, there exists a Navywide need for officers with graduate level education in technical areas. Each PG board reviews those officers who have not been selected as principals or alternates for their nontechnical preferences and whose designator and year group qualify them for technical curricula, and selects a number of "triple X" candidates for potential input to the Naval Postgraduate School.

These selectees, if their undergraduate work was deficient in technically oriented courses, will be required to take the engineering science preparatory course.

Q. *I was commissioned in 1971 and extended for my present shore tour. I'm taking two law school courses at night and am considering trying to complete law school and transfer to the JAG Corps. Can I do this while staying on active duty?*

A. The Navy is authorized to select 17 active duty officers annually for assignment to accredited law schools of their choice for up to 36 months of duty under instruction for completion of a law degree. Selected officers receive full pay and allowances and have their tuition paid by the Navy. See SecNavInst 1520.7 for full details.

Should you not be selected for the Law Education Program and decide to continue your law study at night, you may request an extension of your shore tour to complete graduation requirements. After graduation and admission to practice, you may apply for a change of designator and transfer to the JAG Corps.

Miscellaneous

Q. *How is the date of rank determined for restricted and staff corps selectees?*

A. Vacancies for each month are first computed for the URL, and a date of rank assigned. All RL selectees who precede, and all staff corps selectees who immediately follow, the last URL officer pro-

Questions and Answers

moted for the month are assigned the same date of rank as that assigned the URL officer.

Q. *Must I have a permanent appointment in my present grade to be eligible for selection to the next higher rank?*

A. No. There is no requirement that an officer's present grade be permanent to be eligible for consideration for selection for a next higher grade.

Q. *I'm a USN Temporary LDO/Permanent Enlisted. Will I be subject to the withholding provisions of the dual compensation act?*

A. It depends on the number of years of service with which you retire. If you have 30 years' active duty you will qualify for retirement under an enlisted law and would not be subject to the Dual Compensation Act. If you have less than 30 years' active duty and retire as an officer, then you only qualify for retirement under an officer law and would be subject to the Dual Compensation Act. However, if you request reversion to your permanent enlisted grade and it is approved, you would not be subject to dual compensation. If you revert you would not receive the pay for the highest officer grade held until the end of 30 years.

Q. *How is retired pay currently computed in conjunction with the consumer price index (CPI) increases?*

A. The Comptroller General has ruled that the basis for computing retired pay may go back only one pay period before the one in which you are currently serving. This means that from 1 Oct 1974 until the next active duty pay raise, retired pay will be based on the 1 Oct *1973* base pay rates plus all CPI increases declared during that period.

Therefore, the applicable retired pay multiplied by 6.3 per cent (1 Jul 1974 CPI) will be the retired pay before 1 Jan 1975—when a 7.3 per cent CPI became effective. To determine retired pay after 1 Jan 1975, multiply your retired pay after 1 January by 7.3 per cent. Any subsequent CPIs declared prior to the next active duty pay raise, which is expected on 1 Oct 1975, must also be included.

Q. *I participated in the Senior Medical Student Program and after completion of my internship attended the six-month course in aerospace medicine. What is my total period of obligated service? Also, has there been any policy change regarding obligated service for having participated in the above program?*

A. You incurred a two-year basic obligation and a one-year additional obligation for having participated in the Senior Medical Student Program (SMSP). Six months of your basic obligation was served during the Aerospace Medicine Training (AVMED); however, you incurred six months' additional obligated service for having received AVMED. Therefore, upon completion of AVMED you had one and a half years' basic obligation, one year of additional obligated service (from SMSP) and six months' additional obligation (from AVMED) remaining. This adds up to a total period of obligated service of three and a half years.

There has been no policy change regarding obligated service for the above programs.

Q. *Are there any special medical clearances required for naval personnel and their dependents prior to assignment overseas?*

A. No, but the final responsibility for determining the suitability of the member and his dependents for overseas duty rests with the member's current commanding officer. Therefore, prior to delivering orders to officers and prior to the preparation of standard transfer orders for enlisted personnel, the commanding officer shall see to it that each member ordered to duty abroad is interviewed in order to determine his and his dependents' suitability for such duty.

Q. *I augmented several years ago, understanding that time in grade required for promotion was shorter than ever. This is no longer the case and the time I have to wait for selection now seems unnecessarily long. Yet, I am told that this has its advantages. Will someone please tell me what they are?*

A. The relatively rapid promotions which were experienced during the Vietnam era were primarily the result of the requirement for warfare specialists and the large size of the Navy. With the subsequent reduction in operational units and manpower, there is now the opportunity to plan and use manpower assets more efficiently. The primary advantage to the individual is that the time is now available for not only warfare specialty qualifications, but also education, subspecialty employment and other high-priority assignments such as recruiting duty. This can only work in the Navy's favor, in that it will produce a proportionately greater number of well-rounded and professionally mature naval officers.

Q. *What are the requirements to become a chaplain in the U. S. Navy?*

A. To be eligible for appointment in the Chaplain Corps, an individual must possess an undergraduate degree and a Master of Divinity Degree or its equivalent. Also, each applicant must have an Ecclesiastical Endorsement from his church or denomination which certifies that he is an ordained priest, minister or rabbi actively engaged in the full-time pursuit of a religious vocation. Applications for appointment are processed through the local Naval Recruiting District.

Q. *What is the Naval Legal Service? How does it relate to the office of the Judge Advocate General? How will it improve legal services within the naval service?*

A. Since 1969 the JAG Corps has been organized into four basic components: the office of the Judge

Advocate General under the SecNav chain of command; staff and activity judge advocates; law centers; and a training component, the last three in the CNO chain of command. Under that organizational structure the JAG Corps experienced problems in personnel distribution, funding inequities, and standardization of operations. Following an extensive study of these problems, SecNav approved the establishment of the Naval Legal Service.

This service has 18 subordinate regional Naval Legal Service Offices (NAVLEGSVCOFFs), and some 14 branch offices where geographic considerations require. Under the CNO, the Director of the Naval Legal Service will manage and command the NAVLEGSVCOFFs as an integrated legal-service organization. While some disadvantages to such a centralization were recognized, these were outweighed by a number of significant advantages, including:

- Compliance with a SecDef directive to the Navy to formulate a plan for placing all court-martial defense counsel under the authority of the Judge Advocate General.
- Bringing all law centers (as NAVLEGSVCOFFs) under a single major claimant (CNO) and a single subclaimant (Director, NAVLEGSVC), making possible the rapid adjustment of the allocation of legal assets in time of reduction in force or substantial shifts in the focus of legal business.
- Greater flexibility in managing the Navy's legal resources.
- Standardization of the organization and procedures of NAVLEGSVCOFFs.

Q. *There has been a change to the warrant/LDO program. What are the recommendations/changes that would affect the warrants presently in the programs?*

A. The most significant change as it affects current warrant officers is probably the newly approved functional role definition for the WO which states:

A warrant officer is a technical officer specialist who performs duties: (a) Limited in scope (in relation to other officers), (b) Technically oriented through experience/functional training), (c) Repetitive in nature, (d) Not significantly affected by advancement in rank and therefore amenable to successive tours.

Additionally, a forthcoming billet review will identify billets which meet the criteria of the WO role definition for recoding as WO billets. Although no significant variation in the present size of the warrant community is expected as a result of this action, cross-detailing of warrants is expected to decrease significantly.

Another change is the authorization for commanding officers to promote all warrant officers, W-1 to W-2, after 12 months in grade vice 24. This accelerated promotion permits warrant officers appointed to W-1 under the former program to retain their seniority relative to future selectees who will be initially appointed to W-2 under the new program.

Finally, there has been a change to warrant officer designators and categories which will provide specific officer community identification as well as realign certain WO technical fields to reflect more accurately the scope of their duties.

NAVY SPORTS at ANNAPOLIS

It was a gray day around Annapolis— the kind of damp, dank Friday when you duck from one place to another to get in from the uncertain weather. But for more than one midshipman at the Naval Academy, it was a good time to throw on a sweat suit and run a few miles before dinner.

A jog around the yard, a handball game, a grueling workout on the Severn River with the crew team— they're just a few of the sports activities that make the Naval Academy come alive, rain or shine, on weekday afternoons. For in keeping with its mission "to build young men morally, mentally and physically," the academy has developed extensive and diverse physical fitness and athletic programs that offer a man his choice of virtually any sport.

The theory, in part, is that a physically fit naval officer is better off than one who is not, and as soon as a new midshipman arrives at Annapolis to begin his

Left top: The indoor track team is among the top contenders on the east coast. Left bottom: Teamwork in the Navy crew. Above: The Academy's la crosse team practices in early morning fog.

plebe training he finds out just how important physical conditioning will be in his four years.

Up at dawn to work out for an hour before the summer sun gets too hot, the plebes spend a good portion of their day running, marching and exercising. Also during Plebe Summer, new midshipmen are quickly introduced to all of the 21 varsity and 23 intramural sports open to them, at least one of which they are expected to compete in as midshipmen.

Everyone knows that Navy has a football team and that every year they meet Army in Philadelphia. Fewer people know that Navy has one of the country's top wrestling teams, an outstanding track squad, a crew that is almost always ranked nationally, a rifle team that includes at least one national contender and a fencing team that has seen more than one Olympics fencer graduate from its ranks.

On almost any given Saturday in the fall, winter and spring, a sports fan can find at least one varsity meet to watch, for Navy's varsity program extends far beyond the "glamor" sports of football and basketball. The Naval Academy also fields varsity teams in cross-country, soccer, 150-pound football, sailing, fencing, gymnastics, pistol, rifle, squash, swimming, indoor and outdoor track, wrestling, baseball, lightweight and heavyweight crew, golf, lacrosse and tennis.

Sports facilities at Navy are among the best in the country. Halsey Field House features two basketball courts, indoor tennis courts, all track and field areas and squash courts. Macdonough Hall houses the swimming pool, gymnastics area, handball and squash courts and boxing rings. Also available are: an outdoor track, baseball stadium, astro turf practice field, golf course, tennis courts, ice-skating rink, sailing center and numerous playing fields. The Navy-Marine Corps football stadium rounds out Navy's sports areas.

Midshipmen are recruited for all sports. The wrestling, track and tennis teams especially, standing on consistently good records and with coaches considered among the best in the country, often pull top high schoolers from around the country.

Young men, particularly competitors in sports in which they could not go professional after graduation, are attracted to Navy sports in part because there is no scholarship to worry about if one loses. Says a successful Navy wrestler, "I am wrestling for self-satisfaction here. There is no pressure to stay out for a sport to keep up a scholarship like there is in a civilian college."

Several Navy teams, on the other hand, have made their reputations with men who had never played their sport until they arrived at the academy. Navy's squash team is a perennial winner with tennis players who drift over to the squash courts when they are cut from the tennis team. Football players who didn't pick up a la crosse stick until they were midshipmen have become All-Americans in la crosse, and one of the best sailors in Navy's ocean racing program was a farm boy from

Center: Rugby is the fastest growing sport at Annapolis. Facing page top to bottom: The varsity fencing program has produced more than one national champion, including Olympic fencer Bert Freeman, class of 1970. A member of the swimming squad practices vigorously. A track team member stretches for final inch.

Navy

Ottawa, Kan., who had not stepped on the deck of a sailboat until his plebe year.

A number of Navy athletes have gone on after graduation to become national and international contenders in their sports.

Marine Lieutenant Lloyd Keaser, class of 1972, as a member of the 1973 World Championship Wrestling Team, won the world title at 149 1/2 pounds, and Lieutenant Bert Freeman, '70, was an Olympics fencer in 1972. Two members of the Class of '71, LTJGs Nathan B. Ternes and Tom O'Brien, crewed aboard the America's Cup winner *Courageous* (see the November 1974 ALL HANDS). A present Olympics hopeful is Ensign Ted Bregar, '74, who is now training at the academy for the hammer throw. He was national collegiate champ in that event last year.

Most men who attend the Naval Academy were varsity athletes in high school. Many of them were recruited for a Navy sport. But there are no guarantees they will make the team, and when they arrive at Annapolis they often are beaten out by better athletes. It comes as no surprise, then, that the academy's intramural program displays skills approaching those found on the varsity level and many times exceed intercollegiate competition in spirit and desire to win.

In the intramural program, midshipmen play on company teams, competing against other companies. Most varsity sports are played at the intramural level. Also offered as intramural sports are boxing, fieldball, handball, rugby, softball, team handball, touch football, volleyball, water polo and weightlifting. Rugby and ice hockey are played at the club level also, which means the teams compete with other colleges and area clubs, but not in a varsity status.

Though intramural competition is required for all but varsity athletes, most midshipmen welcome the opportunity to let off steam in sports. Says one midshipman, "When you're in classes all day and spend the evening studying, sports are a great release. They help get rid of a lot of tensions."

Says another midshipman, "Keeping in shape is important for an officer. It's part of having pride in yourself."

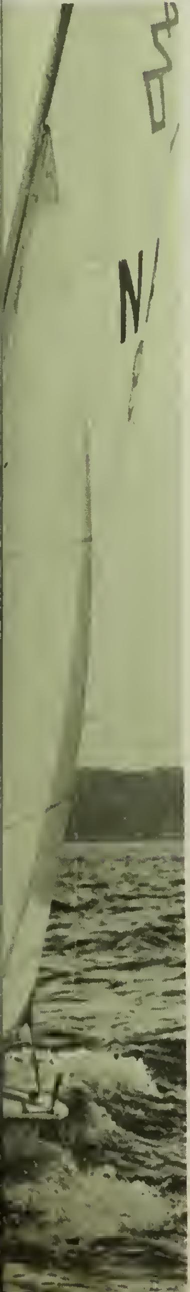
After a season of play, each intramural sport has a playoff series that produces a brigade champion. Competitive spirit runs high as the championship matches approach, and it's not unusual to find midshipmen and friends ringing the fields to cheer their companies to a hard-fought fieldball victory or lightweight football title.

Because physical fitness is a stated goal of the Naval Academy and not just a sidelight, sports take on more importance at Navy than they do at most colleges. They are a constant at Annapolis and there are few times between noon and taps that you won't hear the pounding of sneakers on the pavement or a basketball bouncing across the court in a pick-up game.

When a midshipman says it took a lot of sweat to graduate from the Naval Academy, he isn't kidding.

—Story by Ellen Ratrie
—Photos by USNA photo lab

Right: As in all sports, to reach top performance and maintain it, many hours of practice and competition are necessary.



DAY with DAD

Ask a military junior what his or her father does in the service and the answer will likely be that he "sails in a ship" or "has duty on the base." They are seldom able to pinpoint their father's job.

That's not the case now at the Subic Bay-San Miguel complex in the Republic of the Philippines; not since the "Day With Dad" project held recently.

Approximately 1000 students from grades four through 12 at the Binictican Elementary School, George Dewey Junior-Senior High Schools at Subic Bay and the Oliver Hazard Perry School at San Miguel participated. The project was held for the first time in the area and was in conjunction with the overall concept of career education.

" 'Day With Dad' was instituted as a special program to enable students to learn about their fathers' work," said Dr. Glynn Turquand, coordinating principal of the George Dewey Schools. "By doing this," he said, "we feel it will give them a better understanding of how their fathers' jobs relate to the overall mission and operation of the Subic Bay-San Miguel complex.

"The project has many objectives," Turquand continued. "Primarily, the student will be able to identify his father's work location. The student will be able to discuss the kind of work his father performs and it is hoped that he or she will be able to describe the training the father has received for his current occupation.

"The student should be able to describe the responsibilities of his father's job and, finally, the child will be able to see how his school subjects—such as math and science—relate to the job his father performs."

For some of the students, their day started at 0700 when they went to work at the Navy Public Works Center, Subic Bay. As at other commands there, the student workers were given a briefing on the functions of the command. Later, they were taken on a tour of the various spaces at the commands and the work being performed was explained to them.

Approximately 60 students and parents were hosted aboard the U. S. Seventh Fleet amphibious cargo ship USS *Durham* to give them the feel of salt air and rolling decks.

Following a movie on board, the guests were taken on a tour from the forecastle to the helicopter platform, and from the signal bridge to the troop berthing spaces. To top this, they sampled Navy chow; hamburgers and cheeseburgers added to the atmosphere of eating aboard.

Not all the students were learning about their fathers' jobs. One, 12-year-old Noelle Weir from Clark Air Base, came to see what the Navy was all about.

"Besides, I know what my father does," she said. When asked, she answered, "He's assistant principal of the base school at Clark."

She sees him each day at school.

—Story by Jim Messner
—Photos by F. Mendoza and Messner

Mini Boot Camp in San Diego

Naval Junior ROTC cadets underwent a six-day coed "mini boot camp" at the San Diego Naval Training Center.

The "Mini Boot Camp" program has been in operation at the training center for seven years, but female cadets were only recently included in the training. Girls work alongside their male counterparts throughout the day, but they are berthed in separate barracks.

Instruction during the period covered water safety and survival, small arms training, firefighting techniques and physical fitness. There are more than 200 NJROTC high school units now in operation throughout the United States. In this program, cadets 14 years of age or older receive a minimum of 96 hours of instruction in naval science over a three-year period.

With retired naval officers and chief petty officers acting as instructors, "mini boot camp" has value to the U. S. Navy, the community and the nation.

SEA CADETS HIT THE BEACH

What happens when you try to separate the men from the boys and someone throws in women and girls and everyone does a man-size job and does it well? You quit separating and start integrating.

It happened just that way at the Navy Seabee Base at Port Hueneme, Calif., when Marine Captain A. E. Ingersoll, the Marine Corps Reserve Center's inspector-instructor, invited the Ben Moreell Sea Cadet Battalion to participate in a two-day rubber boat, beach assault training exercise.

Rubber boat training is necessary in the Marine Corps; it's used to help instruct Marines in procedures for beach reconnaissance and mapping. The training further involves plenty of muscle because of the requirement for launching and retrieving heavy, seven-man rubber boats through sometimes heavy surf and pounding ocean breakers.

For this reason, CAPT Ingersoll had a power cruiser stationed offshore with qualified swimmers aboard to ensure everyone's safety. He requested only Sea Cadets in the "older boy, proven swimmer" category be allowed to accompany the training Marine Reservists.

Did someone say "older boy?" A slight complication arose over that term. The Ben Moreell Battalion stands unique among other Naval Sea Cadet Corps battalions. Not only are they the only battalion that is Construction/Seabee-oriented but they are also the only battalion which has female members.

CAPT Ingersoll pondered this, but the offer to train "older boys" still stood. The girls were allowed to observe but were not allowed in the boats. The captain wanted to cooperate but the first consideration was safety.

The first morning of the weekend event dawned crisp and clear with no wind. At the training area, the surf was minimal and the water was warm. By 0830 the battalion, led by NSCC Lieutenant Michael C. Stern and Lieutenant (jg) Edward L. Bledsoe (both Sea Cadet Corps officers), was ready.

Before entering the water with the boats the Marines and Cadets were briefed extensively by CAPT Ingersoll on what was expected of them and the procedures to accomplish the task. The morning training session went smoothly without complications. Everyone got wet but everyone was equally happy.

After a midday break and a cookout, the Cadets were ready to try their wings in a distance-rowing contest against the Reservists. It was during this competition that the first "girl observers" showed up to encourage and cheer on their battalion shipmates. Their support and great enthusiasm helped one group of Cadets claim

Facing page: Pre-launch instructions on the beach at early dawn. Left: A rubber-boat crew lands its craft on the beach. Below: Sea Cadet PO3 Tom Ray assists Marines in bringing boat ashore. Bottom: Marine Captain A. E. Ingersoll, Inspector/Instructor for the U. S. Marine Corps Reserve Center at Port Hueneme, illustrates to the young cadets the correct way to land and launch a boat.

second place in the event.

The enthusiasm for the rubber boats and their operation generated by the boys soon passed to the girls. The girl Cadets' interest and questions did not go unnoticed. A brief conference between CAPT Ingersoll and the Sea Cadet officers resulted in the girls getting their chance at the fun.

Next day the scene on the beach was the same as the first day—kids in fatigues carrying, launching and retrieving rubber boats. Only real difference was that seven of the "Cadets" had longer-than-usual hair.

Five female "Cadets" and two female leaders showed up to compete with the men. The girls were spared no discomfort and were shown no favoritism. They took their knocks, got wet and proved their stuff in upholding the Seabee motto, "Can Do!"

"All things considered," said the captain, "the Sea Cadets, both boys and girls, did a fine job. They were quick to learn and gave the Marines a run for their money."

The Naval Sea Cadet Corps is a federally chartered, nonprofit organization cosponsored by the Navy League and the U. S. Navy. Although the Navy supports the program, it does not provide financial assistance. Both the league and the Navy strive to provide the Sea Cadets with an educational and moral base as broad as possible to develop the "whole person" concept in each Cadet.

The Ben Moreell Battalion at Port Hueneme has members from all cities in the Ventura County area and Santa Barbara.

Membership in the corps is controlled by requiring prospective candidates to pass Navy physical exams and Navy aptitude tests commensurate with the examinees' age group.

Some of the benefits accorded Sea Cadets are an opportunity to train in naval disciplines, be enlisted in the Navy in paygrade E-3 (if scholastically qualified), and the training is considered beneficial to those Cadets interested in applying for naval officer programs.

—Story by JO2 John W. Walker
—Photos by PH2 Charles Hubbard and
JO2 Waler

from the desk of the Master Chief Petty Officer of the Navy

MCPON JOHN D. WHITTET

'Keen Competition'

For almost every Navy enlisted member, the advancement process is a vitally important issue. In fact, a sizable percentage of the mail I receive every week deals with some phase of the Navy's enlisted advancement system.

Perhaps the greatest amount of curiosity and concern stems from misunderstanding. For instance, many of those members seeking advancement to chief petty officer or above do not fully understand the enlisted selection board process. The tide of correspondence to my office seems to rise and fall with the release of the yearly recommendations by these boards. Since this mail often reflects misinformation regarding selection boards, a brief review of the selection procedure seems appropriate and could be beneficial to all hands.

Advancement quotas in each rating are determined by vacancies within the individual ratings as monitored by the Bureau. Regardless of the number of candidates for selection in any one rating, the number of authorized advancements may never exceed the preestablished quota. Using this approach, effective competition is established and maintained within the total rating community. Thus, the ultimate goal of the selection boards is to select only those members best qualified for advancement to the limited number of vacancies.

In determining the number of personnel to be advanced by rating and pay grade, the Chief of Naval Personnel must consider the net result of actual and projected gains and losses, the beginning inventory, and the authorized end strength for the year.

The Navy is authorized by the Office of the Secretary of Defense to have a maximum of .78 per cent and 1.81 per cent, respectively, of its total enlisted force at the master chief and senior chief levels. A ceiling is also established at the chief petty officer level based on current needs of the Navy. Authorized strength as approved by the Secretary of Defense is based on budget and defense considerations and is normally lower than CNO requirements.

Because of the large number of test takers involved, only those members who have the highest final multiples within their ratings are considered by the selection board. For chief petty, 50 per cent of the test takers have their records appear before the board. On the other hand, 75 per cent of the test takers for master chief and senior chief have their records appear. Final multiples are determined by combining test scores and performance evaluations.

Many individuals wonder about, or question, the condition of their service jackets when reviewed by the board. Navy members who are in the Washington, D. C., area may stop in at the Bureau of Naval Personnel's Enlisted Records Review room and personally review their records. If you cannot travel to Washington and you suspect that some important documents may be missing from your service record, you may forward such documents to the recorder of the selection board, and the documents will then be placed in your record.

Occasionally, a member may be unaware that information is missing from his service jacket. To solve this problem, the secretary of the board is authorized to contact individual commands for recovery of missing data. The entire record of each candidate is thoroughly reviewed, with every page of every service jacket receiving careful scrutiny by a qualified member of the board.

Thus, the selection board is not an automated process. Instead, it is a process giving each candidate's record a penetrating review by experienced, dedicated, and responsible board members. This provides the human element for a look at the "whole man" rather than a cursory mechanical evaluation.

The selection process is an arduous, but necessary affair. The actual screening and selection procedures are accomplished here in the Bureau by a board composed of senior naval officers and master chief petty officers. For instance, this year's E8/E9 selection board is composed of 30 officers and 16 master chief petty officers. Each of the 46 members pledges an oath or affirmation to "recommend those found to be best qualified for advancement without prejudice or partiality." Selections for promotion are made by a majority vote.

The specific characteristics that are considered desirable for advancement may vary from year to year. Therefore, every Navy member must build his record from first enlistment to the time he or she becomes eligible for chief petty officer status. In general, you may be assured that the board looks well beyond test scores and performance evaluations. Types and locations of duty, age, health, awards, educational credits (both civilian and Navy), proven administrative ability, potential, discipline record, time in rate, time in service, and background may also merit consideration.

Each selection board has considerable latitude in weighing all of these elements in order to define the desirable man or woman. While test scores and performance evaluations are used to determine initial eligibility for the selection board, these factors are not the only criteria considered by the board when looking at the "whole man." To believe that any one of these factors completely outweighs the others would be faulty thinking, but you can still count on past performance of Navy duty as the key in these selection considerations.

Many candidates selected to be alternates and a great number of those not selected would like to know exactly why they were not chosen for advancement. While I can sympathize with these questions, the answers are simply not available. Deliberations and evaluations regarding individuals are not a part of public record, and board members are sworn to secrecy.

However, this secrecy is not meant to stifle, but is instead for the protection of all those considered. Board privacy promotes an atmosphere of equitability and allows for freedom from imposition of advantaged and self-interested contacts. Every candidate is thus assured of a fair and impartial review and the chance to be selected on his or her own merits.

If you are a nonselectee or alternate, chances are that other member's qualifications and characteristics proved more desirable than your own. Remember that board deliberations are not aimed at *nonselection*; rather, board deliberations are a process of *selection* of the best qualified from among many with excellent qualifications.

Not everyone can become a chief, senior chief, or master chief petty officer. In the competitive environment present in today's enlisted Navy, the door of promotion cannot open to everyone who stands before it. Nor does it always open when first knocked upon.

The name of the game is to be competitive. Long years of faithful service are not the sole criteria for promotion. Accept this challenge and spirit of competition. Prepare yourself. Push yourself. Cultivate your study habits. Be marketable. Get busy and create a demand for yourself. Above all, don't give up. Perform!!

- THINKING OF CHANGING RATING OR REENLISTING? SEE NEW "OPEN" LIST

A new "open ratings" list was recently issued as change five to BuPers Instruction 1133.25A. The list, which categorizes all ratings and certain NECs into open, neutral or closed groups, is based on current manning levels and governs all retention and conversion programs. If you are thinking of changing rating or reenlisting, ask to see this instruction at your personnel office.

- SCORE/STAR/LATERAL CONVERSION PROGRAMS HAVE BEEN REVISED

Some major changes have been made to the Selective Conversion and Reenlistment (SCORE), lateral conversion, and the Selective Training and Reenlistment (STAR) Programs. Highlights of some of these changes are: Those currently serving on an enlistment or extension for which VRB, SRB or EB was paid will not be eligible for a change in rating until EAOS. Those authorized for rating conversion under either conversion program will be required to convert to the new rating prior to execution of a bonus reenlistment in an SRB-eligible rating. The active duty limitation for STAR has been extended from four to five years. Complete details concerning SCORE/STAR Programs can be found in BuPers Notice 1133 of 24 Mar 1975, and for lateral conversion,see BuPersMan 2230180.

- LDO/WO DESIGNATORS/BILLETS SCHEDULED FOR REALIGNMENT

Designators for warrant officers and limited duty officers are scheduled to be changed to identify most members with their warfare community (surface, air, submarine). In addition, all WO and LDO billets will be converted to conform with the new designators. These actions are expected to be completed in July. Once the conversion is complete, assignment and distribution of LDOs and WOs will be aligned with the corresponding officer community. Assignment in BuPers of photographers, bandmasters, data processors and admin/ship's clerks will shift from their present surface, submarine or aviation assignment division to a special assignment division. Distribution of the remaining LDOs and WOs with 64XX/74XX or 65XX/75XX designators will be controlled by the restricted line and staff corps assignment divisions.

The purpose of the change is to provide LDOs and WOs with officer community identification and a broader occupational field or technical area, and to provide positive identification of air, surface and submarine associated personnel and billets. The changes were issued as a result of recommendations by a special LDO/WO study group conducted last year. Additional information is contained in BuPers Notice 1210 of 11 Apr 1975 and OpNav Notice 1211 of 8 Apr 1975.

- CERTAIN RATINGS FOR WOMEN CONTROLLED TO ENSURE SEA/SHORE ROTATION

The number of women entering the various Navy enlisted ratings is being carefully monitored by BuPers. An individual goal for women has been established for each rating and, as a result, about 15 ratings are currently closed to them, approximately 40 ratings have controlled entry and the remaining 45 are unrestricted. BuPers officials emphasize that this is not a new process, and that entry into some ratings has always been limited for women because they are primarily shipboard ratings. Several criteria are used in establishing the goals for women in various ratings. The most important is the necessity of maintaining a realistic sea/shore rotation for men without unduly restricting the availability of ratings that can be open to women. Women who wish to enter the 40 controlled ratings by conversion should refer to BuPers Manual 2230180. Entry through on-the-job training may be authorized only by approval of written request to the Chief of Naval Personnel. Rating status lists are given in BuPers Instruction 1410.4 of 18 Apr 1975.

- WOMEN OFFICERS TO BE SCREENED FOR COMMAND ASHORE

BuPers has announced that by the end of FY 75 all women officers in the grades of lieutenant commander and commander will be screened to determine their eligibility for becoming COs or XOs of shore commands. Previously, the command screening system had been applied only to male LCDRs and above being considered for XO and CO billets at sea, and both male and female officers in the grade of captain for major shore commands.

- FASTER WARRANT OFFICER PROMOTIONS AUTHORIZED

SecNav recently authorized commanding officers to promote warrant officers (W-1) to chief warrant officers (W-2) after only 12 months in grade. Formerly, it took 24 months for promotion from W-1 to W-2. According to BuPers, however, those appointed to W-2 under the 24-month program will retain seniority over individuals achieving W-2 status in 12 months. Similarly, officers promoted to W-2 after only 12 months will retain seniority over those enlisted personnel to be promoted to W-2 next year under the new WO program. The early promotion plan is part of a larger program beginning in FY 76 that will terminate the W-1 grade, giving individuals selected for the warrant program immediate W-2 status.

- NEW INTER-SERVICE POSTAL CLERK SCHOOL TO BEGIN

The Navy's Postal Clerk "A" School, located in San Diego, will close on 9 May and a new inter-service training program under U. S. Army sponsorship will take its place. The new five-week-long course will be located at Fort Benjamin Harrison, near Indianapolis, Ind. Classes will convene 23 times a year with the first class starting 7 July. Approximately 230 slots in the new school have been allocated to the Navy during FY 76.

- APPLICATION TIME FOR SOUTHEAST ASIA DECORATIONS EXTENDED

The time limit in which to apply for personal military decorations for acts and services in Southeast Asia has been extended to 24 Oct 1975. To be eligible, action must have been performed in direct support of military operations in combat zones in South or North Vietnam, Cambodia, Laos, Thailand or contiguous waters or air space between 1 Jul 1958 and 28 Mar 1973, inclusive. Details for application are contained in SecNav Note 1650 of 7 Jan 1975.

- PERFORMANCE TO BE EMPHASIZED IN FUTURE E-8/E-9 SELECTIONS

A new advancement process for E-8/E-9 hopefuls was recently established which will put more emphasis on performance. In the past, the cutoff point has allowed about 75 per cent of those who took the E-8/E-9 exam to go before the selection board. The cutoff point for the written examination has been lowered to permit approximately 95 per cent of those taking the test to achieve a passing score. However, beginning with the last E-8/E-9 advancement exam, candidates performance evaluations will be converted to a numerical value by a computer process. This number, when added to the test score, comprises a final multiple. Records of candidates who achieve a final multiple above the 75 per cent cutoff are placed before the board for consideration. This process differs from previous years in which candidates' records were placed before the board on the basis of test score only.

• POLICY ON E-7/E-8/E-9 SUBSTITUTE EXAMS ANNOUNCED

BuPers recently announced that the deadlines for ordering substitute advancement examinations for the top three enlisted pay grades have been changed. Substitute E-7 exams will now be available through 15 April, and E-8 and E-9 exams through 15 January. In the past, requests for substitutes were only approved during a two-week period after the administration of the Navywide tests for these pay grades. The policy change was made because these three exams are only given once annually, and command errors in requesting them could prevent candidates from being advanced for a full year. Additional information on the new policy is available in NavOp 42-75 and will be incorporated into BuPers Instruction 1430.16.

• REVISED NAVY RETIREMENT GUIDE NOW AVAILABLE

The fifth edition of the "Navy Guide for Retired Personnel and Their Families" (NavPers 15891D) was recently distributed to all Navy ships and stations. The publication is designed to give members information necessary to plan for an approaching retirement. It contains such topics as: the retiree's rights and privileges, benefits from federal and state agencies, restrictions on civilian employment, and family protection and survivor benefits. Commands may requisition additional copies in accordance with NavSup P-2002, using FSN 0500-LP-345-1020. If requirements exceed 500 copies, forward requisitions for approval to Chief of Naval Personnel (Pers-7313), Navy Department, Washington, D. C. 20370.

• NEW EDITION OF NAVY RDT&E GUIDE NOW AVAILABLE

The 1975 edition of the Navy's Research, Development, Training and Education (RDT&E) Guide is now available. Designed to aid both newcomers to RDT&E and practicing "journeymen," the 260-page manual describes the system through which the Navy plans and manages its R&D programs, and identifies specific directives which contain more detailed information. Copies may be obtained by writing: Commanding Officer, Navy Publications and Forms Center, 5801 Tabor Ave., Philadelphia, Pa., 19120. Use FSN 0515-LP-400-3402.

• 1975 ALL-NAVY CARTOON CONTEST UNDERWAY

Entries for the 20th All-Navy Cartoon Contest are now being accepted. This year's competition is being sponsored by the Chief of Information and is open to personnel on active duty in excess of 90 days, and their dependents. Entries will be judged in three separate categories: active duty, dependents and, for this year, a special category of Bicentennial-related cartoons. Deadline for all entries is 1 Oct 1975. Contestants may enter as many cartoons as they wish, but each must portray a Navy theme, be drawn in black ink on 8x10 1/2 inch white paper or illustration board and include the following information on back of each entry: Active duty personnel--

- Full name, grade/rate, social security number; duty station, mailing address with zip code of FPO; title of cartoon or caption; signed statement as follows: "I certify that the cartoon to which this statement is attached is original. All claims to this entry are waived and I understand the Department of the Navy may use it as desired."

Dependents'sentries should include--

- Full name, age; mailing address with zip code of FPO; name and address of sponsoring command; title of cartoon or caption; signed statement same as above, with an additional statement;: "I am a dependent of (name) grade/rate and duty station."

Contest cartoons become the property of the Department of the Navy and will not be returned. Forward all entries to: Navy Internal Relations Activity, Print Media Division, 2221 Jefferson Davis Highway, Crystal Plaza No. Six, Room 1044, Washington, D. C. 20360. Further details may be obtained from your Special Services Officer.

• DEADLINE APPROACHING FOR MCNAMARA LACE CONTEST

This is a reminder that the 15 June deadline for the BuPers-sponsored McNamara lace contest is approaching. The lace will be used to decorate the Navy's Armed Forces Bicentennial exhibit vans. Those who wish to enter a piece but can not make the deadline are encouraged to submit an entry anyway, since it may still be used in the vans. All work should begin with a four-foot wide by three-foot deep canvas. When completed it should be washed, bleached, shrunk and submitted to the Navy Recruiting Exhibit Center, Building 40, Washington Navy Yard, Washington, D. C. 20374. All entries become the property of the exhibit center.

• DESRON 12 SHIPS TO MOVE FROM GREECE

All five ships in Destroyer Squadron 12, currently homeported at Elefsis, Greece, will be moved to new U. S. homeports soon. The ships, all expected to return to East Coast ports, are: USS William M. Wood (DD 715), USS Vreeland (DE 1068), USS Manley (DD 940), USS Barry (DD 933) and USS Sampson (DDG 10). The move is a result of negotiation conducted recently by the U. S. and Greek governments on the various aspects of Greek-U. S. military cooperation. The DesRon 12 move will affect about 1800 military personnel and 1200 dependents.

• USS NIMITZ COMMISSIONED AT NORFOLK

The Navy's second and newest nuclear powered aircraft carrier, USS Nimitz (CVAN 68), has been commissioned at Norfolk Naval Station (look for a report upcoming soon). The largest warship in the world, Nimitz has an overall length of 1092 feet, extreme breadth of 252 feet, a flight deck area of four and one-half acres, displaces 94,000 tons when fully loaded and is capable of speeds in excess of 30 knots. She can accommodate a crew of 6286, about 3000 of whom will be air wing personnel to look after her approximately 100 aircraft. Powered by two nuclear reactors, she can steam for about 13 years without refueling. The reactors will provide fuel equivalent to about 11 million barrels of oil during that period. Following carrier qualifications at Guantanamo Bay, Cuba, late this summer, Nimitz will be assigned to the Atlantic Fleet and homeported in Norfolk.

• NEW DESTROYER TO BE NAMED FOR FRENCH ADMIRAL IN AMERICAN REVOLUTION

Commemorating the nation's Bicentennial, the Navy's latest Spruance-class destroyer (DD 974) will be named for French Admiral (Comte) Francois de Grasse. ADM de Grasse commanded the French fleet which played an important role in the American victory at Yorktown during the Revolutionary War. She is the second American ship to be named in his honor, and is the 12th of 30 planned Spruance-class destroyers. Comte de Grasse is scheduled to be launched next year.

• TWO NEW LOS ANGELES-CLASS SUBS MOVE TOWARD JOINING THE FLEET

Two more Los Angeles-class nuclear-powered attack submarines recently took steps toward joining the fleet with the launching of Baton Rouge (SSN 689) and the keel-laying of Birmingham (SSN 695) in back-to-back ceremonies at Newport News, Va. Following sea trials, Baton Rouge is scheduled to be commissioned in late 1976. Birmingham is slated for launch in late 1976 and commissioning late the following year.

• FIRST MK 92 FCS MISSILE SHOT A SUCCESS

The Navy's new MK 92 Fire Control System (FCS) guided its first standard missile shot to a direct hit on a drone aircraft at 20,000 yards during recent at-sea testing aboard USS Talbot (DEG 4). The successful missile shot followed the shooting down of another target by Navy's new 76mm gun, controlled by same FCS. The MK 92 FCS is a light weight, fast-reaction, multiple-purpose system intended for smaller ships such as patrol frigates (PF) and patrol hydrofoil missile ships (PHM). It provides air and surface surveillance, gun and missile fire control, and can engage multiple air and surface targets simultaneously.

• NAVY WILL TOUR AS MEMBER OF ARMED FORCES BICENTENNIAL EXHIBIT VANS

Navy is participating in an Exhibit Van Project which is about to get underway. A fleet of 16 vans will tour the country during the Bicentennial Era. The group will consist of four caravans of four vans each, including one from each service. The caravans will tour four different areas of the United States, corresponding roughly with the time zones, and will premier on 4 July 1975 near the headquarters of each operating location: Alexandria, VA; Dayton, OH; Oklahoma City, OK; and Sacramento, CA. Each van has been especially designed and constructed to contain historic memorabilia, slides, photographs and film segments unique to each service and will support the theme "History of the American Armed Forces and their contribution to the Nation." During the next 1 1/2 years years, the vans are slated to tour smaller communities, carrying the bicentennial to the "grass roots." A crew of representative volunteer service men and women will travel with each van to transport, prepare and interpret exhibits.

● LIGHTWEIGHT 8-INCH GUN SUCCESSFULLY TESTED

The Navy's new eight-inch, major-caliber, lightweight gun was recently fired successfully in initial at-sea tests on board USS Hull (DD 945). The gun is larger than any in the Fleet today and was developed for shore bombardment and troop support during amphibious assaults. Designated Mark 71, it is designed for installation on destroyer-sized ships which normally carry five-inch guns. The lighter weight gun, which has been under development since the mid 1960s, requires less shipboard space than its earlier counterparts and can fire a 260-pound projectile more than 15 miles. It is automatic and permits a single operator to load and fire. Development of the Mark 71 is under the direction of the Naval Sea Systems command.

● ENVIRONMENTAL PROTECTION AWARD DEADLINE CHANGED

The deadline for submission of applications to this year's SecNav Environmental Protection Awards competition has been changed from 15 March to 15 October. The extension was made to put the Navy's program in phase with the DoD program. In addition, the number of categories for competition has been expanded this year to include: Large and small ships, large and small shore installations, industrial facilities, medical facilities, research and development activities and large and small Marine Corps activities. Applications should be submitted to CNO via the normal chain of command.

● WEARECONRON FOUR DISESTABLISHED

The world-famous Navy hurricane hunters, they fly no more./We have disestablished Weather Reconnaissance Squadron Four./We've ranged the globe since forty-three/In search of storms that cross the sea./Two thousand times we crossed the eye,/In dark and wet and stormy sky./Two thousand times we braved the gales/for motor ships and those with sails./Three hundred storms of fearful wrath/To warn the people in their path./ For countless hours these fearless men/ Flew places where few men have been./We leave a record for the Fleet to chase/ A seventeen-year accident-free pace./And now in accordance with reference A (122137Z/2/75)/The hurricane hunters are no more today.--WeaReconRon Four msg to CNO.

● WIFELINE NOW AVAILABLE ANYTIME BY PHONE

You can now reach Navy Wifeline Association at anytime by telephone. The association, which is dedicated to helping other Navy wives by "passing the word," has installed a message-recorder to receive calls after office hours. The number is (202) 433-2333. Wifeline now also has an Autovon number, 288-2333. It, too, records calls outside working hours.

● USS YORKTOWN TO BECOME FLOATING MUSEUM

The "Fighting Lady" of World War II, USS Yorktown (CVS 10), is slated to become a national shrine and navy museum at Charleston, S. C. She will be preserved by the Patriot's Point Development Authority of South Carolina, a nonprofit state agency, and will be the first carrier ever donated to such an agency. The 40,000-ton, 872-foot-long ship is scheduled to be towed to Patriot's Point from the inactive ship facility, Bayonne, N. J., this month.

The Bicentennial American

FREEDOM TRAIN

Carrying her vital cargo, she'll crisscross this land of ours on her 21-month, 17,000-mile journey, bringing to 10 million viewers in the 48 contiguous states a look at such exhibits as a 1776 copy of Thomas Paine's Common Sense, the very first bible printed in this land and Indian artifacts. She'll carry as well Ty Cobb's baseball bat, Martin Luther King, Jr.'s, vestment robe, and moon rocks brought back by the astronauts.

These 25 bright red, white and blue cars, pulled by a 425-ton steam engine, make up the Bicentennial American Freedom Train.

With her first stop in Delaware (the first state to ratify the Constitution) on 1 April, the Freedom Train called at Boston, Cleveland and Chicago—among many other cities—during the spring. By 24 October, she'll be in Seattle, Wash., and in San Francisco, Calif., on 25 November, as tentative plans call for. Early in 1976, the train will leave San Diego, Calif., and begin her swing eastward with stops at Fort Worth, Tex., New Orleans, La., and on to New York City on 14 July.

It's one thing to know of the U. S. Constitution, it's another matter to view George Washington's personal copy, complete with his marginal notes.

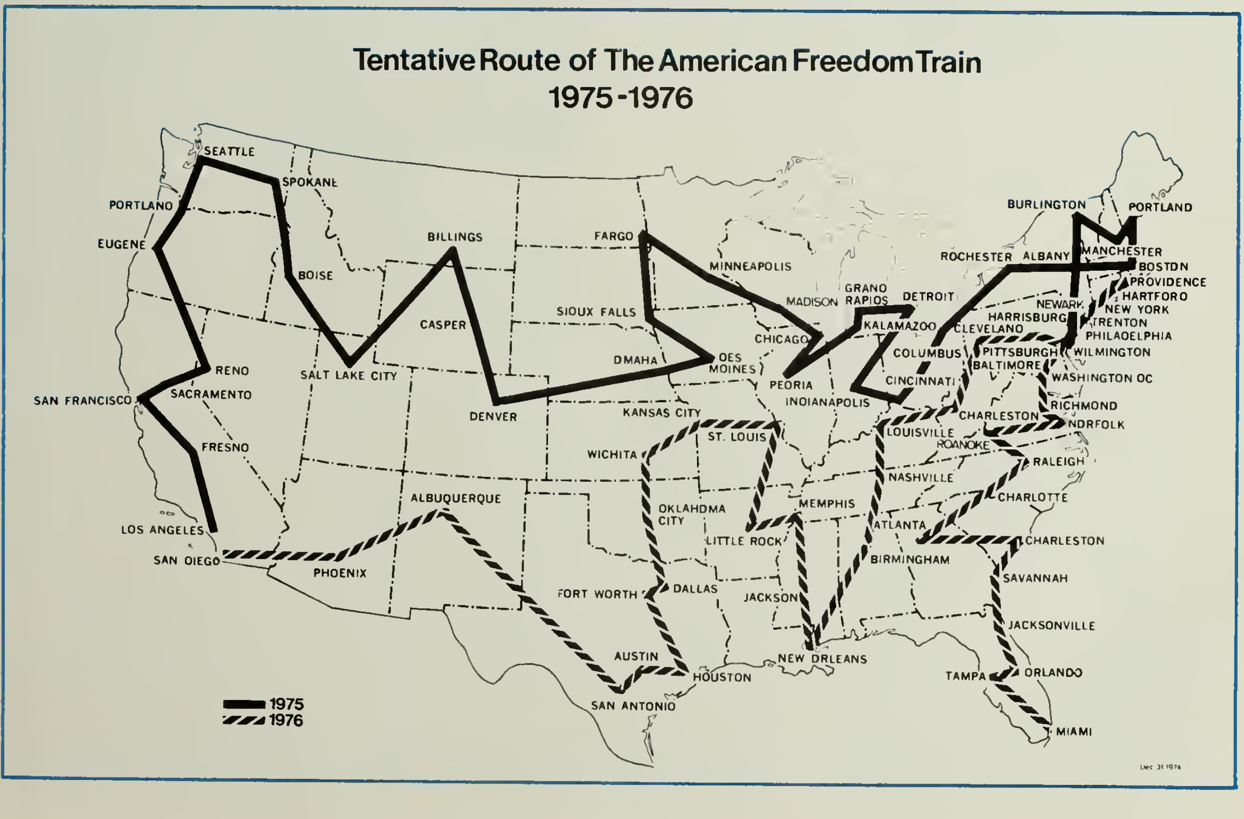
Star attraction of the train is an eight-ton, double-scale model of the Freedom Bell carried aboard one of the train's two glass-enclosed display cars—the other car is given over to transportation vehicles. The bell is a product of a foundry in Aarle-Rixtel, The Netherlands, and it was cast at one octave lower than the Liberty Bell itself—or the musical note F. Why that note? The original bell in Philadelphia cracked, not as supposed by some people when it was rung on 4 Jul 1776 (it wasn't rung that day), but when it was tolled on 6 Jul 1835 for the funeral of Chief Justice John Marshall. The crack probably came about because of a defect in the casting but no one is really sure—best to change the note.

Completely smooth, unpainted and highly polished (80 per cent copper, 20 per cent black tin), the bell carries the same typeface, decoration and detail—excluding crack—of the original including, "Proclaim Liberty Throughout All the Land and Unto All the Inhabitants Thereof."

In a sense, that's the real purpose of today's train. Before its journey is over, it will pass through hundreds of American communities and will have been viewed along the way by 40 to 50 million Americans. Its stops in more than 78 cities will be within an hour's easy drive of hundreds of other communities.

Inside the train, visitors will pass through on a moving walkway which can accommodate 1800 people an hour during each 14-hour viewing day. Transistorized sound units play a running narration coordinated with the exhibits. Much was learned from the experience gained during the 1947 American Freedom Train journey which logged 37,160 miles during its 16-month journey. For example, during one stopover in New York City, people waited four abreast in a line that was 15 city blocks long—since that train could only accommodate 640 people an hour; hence, today's moving walkway.

A $4 million donation by four public-spirited U. S.



Tentative Route of The American Freedom Train 1975-1976 corporations provided the cornerstone for the Freedom Train operation and another $13 million was raised to provide the building blocks. All monies received over and above the cost of the operation will go for charity. Therefore, the Freedom Train is a truly nonprofit enterprise designed to bring living U. S. history to the nation's grassroots.

Other significant items carried by the train are:

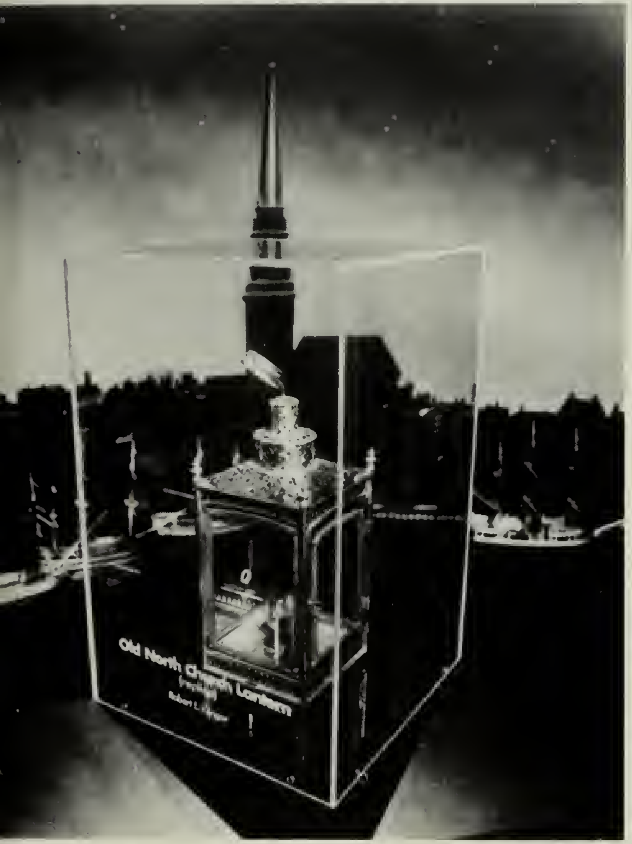
- Benjamin Franklin's draft of the Articles of Confederation.
- Revolutionary War rifles and muskets.
- Delaware's Ratification of the Bill of Rights.
- Manuscript of the "Battle Hymn of the Republic."
- Original Louisiana Purchase Agreement.
- Gold miners' tools circa 1850.
- Lincoln's Preliminary Emancipation Proclamation.
- President Roosevelt's speech to Congress after Pearl Harbor Day.
- President Kennedy's handwritten draft of his inaugural speech.
- Sixty original machine patents including household items, industrial equipment, transportation, agriculture and communications.
- Model of the Dallas-Fort Worth Airport.
- A Nobel Peace Prize.

A ceremonial honor guard from the U. S. Army travels with the Freedom Train while a sophisticated environmental and security protection system has been designed to safeguard the historical artifacts and documents.

Logistics involved with the train were so complex that it was necessary to run a preliminary train across the nation last year to coordinate advance planning. Aboard that train—called the "Preamble Express"—a group of specialists investigated track conditions, display sites, security plans and local and state activities planned around the Bicentennial. Those specialists developed final plans for the Freedom Train.

For true railroad buffs, the statistics on the train's engine reveal that it's a former Daylight class steam locomotive of the Southern Pacific Line. It was donated to the American Freedom Train by the city of Portland,

Facing: Top-Hank Aaron presents uniform to Jon A. Foust, president of the American Freedom Train Foundation. Bottom left-Artist James Wyeth with his portrait of President Kennedy and Ruth Packard of the foundation. Right-Loading of Freedom Bell. Below: Replica of Paul Revere's famous lantern; bottom-Exhibits of "Innovation Car."



Ore., and has been fully restored and tested.

Below, in capsule form, is a rundown of the American Freedom Train's significant cars and what each contains:

- Car 1—The Beginning: A look at the first moments of the struggle for independence from 18th century New England. On view are precious documents that are the foundation of our liberty such as George Washington's copy of the Constitution and Pennsylvania's Ratification of the Constitution.
- Car 2—Exploration and Expansion: An exhibit of American frontiers from the opening of the west to the penetration of space. Early pioneers were lured by gold; modern pioneers look to the mysteries of outer space.
- Car 3—Growth of the Nation: Changes to the cities, farms and transportation centers of the nation; a musical reminder stresses the need for preserving our national environment.
- Car 4—Origins: Traces the ethnic, religious and geographic origins of contemporary Americans; music of dozens of lands.
- Car 5—Innovations: Reviewing inventors and technicians, American "know-how" and the free enterprise system—patent drawings and models.
- Car 6—Labor and Professions: Examination of the diversity and magnitude of fields of creative Americans from silversmiths and glassblowers to film-makers and scientists.
- Car 7—Sports: Panorama of American sports heroes; artifacts and film clips including the feats of Jesse Owens, Babe Ruth and Secretariat, the world-famous thoroughbred racehorse.
- Car 8—Performing Arts: A montage of American talent through vaudeville, Hollywood, radio and television, and the Broadway stage.
- Car 9—Fine Arts: A gallery of American painting and sculpture—priceless paintings and sculpture capturing the look of our country.
- Car 10—Conflict and Resolution: Portrayal of five events in American history which have tested the nation's fiber, as one example, President Roosevelt's economic strife.
- Showcase Cars: The first deals with transportation and contains a series of wheeled vehicles; the second contains the Liberty Bell, a project of the American Legion on behalf of the nation's children.

The Freedom Train is operated by a nonprofit, public foundation called the American Freedom Train Foundation, Inc. As stated, all money collected by the organization, not used in the administration, construction and operation of the Freedom Train, will be donated for charitable purposes. Admission tickets to the train exhibits will be priced at $2.00 for adults and $1.00 for children. A portion of the advance ticket sales in each locale will be returned to that city for local Bicentennial activities.

She follows in the wake of many splendid and many historic trains—the American Freedom Train of 1975-76 is well worth the time and effort it takes to go down to the local station and have a look-see. After all, it's the nation on wheels of steel.

J. F. Coleman

letters to the editor

Okay, Okay, Okay

SIR: With reference to the April 1975 issue of ALL HANDS, the "remarkable photograph" of the F-14A *Tomcat* fighter on your inside front cover is actually a remarkable photograph of an RA-5C *Vigilante* reconnaissance aircraft. Still, the magazine looks great.—N. Polmar

. . . A remarkable photograph indeed. That F-14 has lost a tail and evolved into an RA-5C *Vigilante*!—LT Ray L. Boylan

. . . All the reconnaissance and aircraft recognition experts here in Reconnaissance Attack Wing ONE recognize the F-14A *Tomcat* pictured on the inside front cover of the April 1975 issue as an RA-5C *Vigilante*. It is indeed an interesting and remarkable photograph.—CAPT Clifford E. Thompson

You blew it. The inside front cover of April ALL HANDS looks like an A-5 to me, not an F-14. (Incidentally, you have a good magazine, keep up the good work.)—LT Fort A. Zackary, Jr. USN

. . . The single vertical stabilizer and the large blister between the exhausts are identifying features of the RA-5C. Also, note the absence of ventral fins which are present on the F-14.—PT1 William G. Weiss, USN.

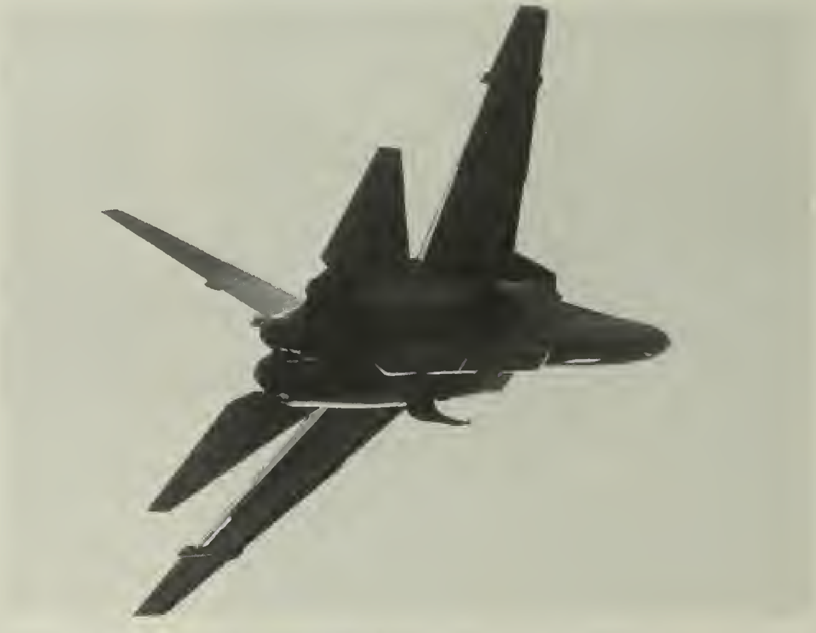
. . . I think that the aircraft in that photograph is not an F-14 because the F-14 has two vertical fins. The wings and stabilizers look like those of an F-14 but I just cannot accept that it is an F-14 because of the single vertical fin.

In any case, will you please clear this matter up for us here in the squadron because my friends and I are having a little discussion about this photograph. Thank you very much and more power to ALL HANDS!—PNSN Roberto R. Narvaez, USN.

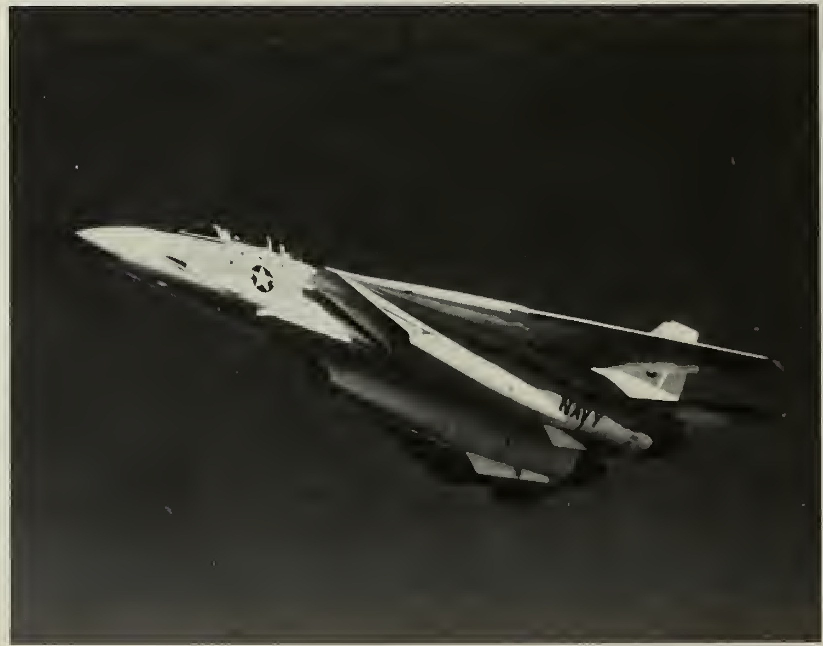
. . . The photo could not even be a *Tomcat*. The picture only shows *one* vertical stab, when the F-14 has twin stabs. The RA-5 is the C model as detected by the pods carried and only having one stab.

Well, you goofed!—AQ1 Thomas W. Parkinson, AQ2 Richard Stagnoli and AQ2 Michael Shrader, USN.

- *At least all are agreed that it was indeed a remarkable photo. And, well, it happened this way—we goofed. (The official photo was released with the wrong caption, and it wasn't caught until we had gone to press.) Everyone should know that a* Tomcat *has two tails. Now we do too. But thanks for all those letters. It proves once again that* ALL HANDS *has a vigilant and sharp-eyed audience—those kind comments were appreciated too.*—ED.



Above: RA-5C *Vigilante* reconnaissance aircraft, incorrectly identified as a F-14A *Tomcat* on the inside front cover of the April 75 issue of ALL HANDS. Below: F-14A *Tomcat*.



Queen's Last Skipper

SIR: In view of the fact that I was the last Navy officer in charge of USS *Delta Queen* (YFB 56)—see ALL HANDS, Sep '74, page 54—the following information may be of interest to your readers:

Delta Queen was requisitioned by the Navy for ferry service on San Francisco Bay and the Sacramento River during World War II. The original mission of the *Queen* as a training and barrack facility was expanded to an area transport for military personnel.

For example, Army and Navy men were carried to and from Camp Stoneman (Pittsburg, Calif.), Treasure Island, NAS Alameda, and the San Francisco piers to incoming and outgoing Navy transports. It is estimated that approximately 10,000 men were transported weekly. She was a busy ship, underway seven days a week, manned by two warrant officers, four chief petty officers and 40 other enlisted men, all of whom were billeted and messed on board.

Queen was very tricky to handle because she was like a big sailboat, with her flat bottom and high freeboard, bucking 10- to 25-knot winds every day. She had a mean draft of six and a half feet forward and seven and a half feet aft. Besides her large sternwheel, she carried five large wooden rudders forward of the sternwheel and, when turning, she pivoted by the bow and swung around by the stern. This was necessary on the sharp river bends on the Sacramento River.

Her passenger capacity was 3500 persons. The cargo deck alone held 1600 persons (standing room only) and in addition she carried 5000 life jackets.

As part of her illustrious history, the *Queen* acted as host to the United Nations when it was first being formed in San Francisco, and also hosted the Shriners' convention in July 1946; this group included the late President Harry Truman. When the *Queen* was not transporting military personnel she was hosting military and civilian naval shipyard workers with their families on conducted tours of San Francisco Bay.

When Japan surrendered, the *Queen* took part in Operation Flying Carpet in returning Navy personnel to the United States. Thousands of sailors were returned to San Francisco for processing at Treasure Island. During this time, I was dispatched to NAS Alameda, where I received from USS *Saratoga* 3200 men for transportation to Treasure Island.

On 20 Aug 1946, I delivered the *Queen* to the War Shipping Administration for lay-up in the Suisan Bay Reserve Fleet on the Sacramento. She was put out of service on 21 Aug 1946, and sold at auction on 20 Nov 1946 to the late Tom R. Greene, president of Greene Line Steamers of Cincinnati, Ohio. Her superstructure was boarded up and she was towed from San Francisco, through the Panama Canal around to New Orleans, over 5261 miles of open sea. She steamed under her own power to Pittsburgh, Pa., for overhaul and finally went to her home port of Cincinnati.

The steel work of the *Queen* was fabricated at Glasgow, Scotland, and shipped to Stockton, Calif., for assembly. The hull was launched there in 1926. The upper works of the *Queen* and her companion boat (USS *Delta King*, YFB 55) were made of oak, teak, mahogany and Oregon cedar. The main deck was constructed of ironwood imported from Siam.

Her hull is 250'x58'x11.5'. Her engines are cross compound condensing, 26s, 52½s with a 10-foot stroke. She had two water tube boilers that burned bunker C fuel oil, and had a flank speed of 11 knots.

The *Queen* is very much alive and still in service, operating out of Cincinnati making overnight passenger trips on the Ohio, Mississippi, Illinois and Arkansas Rivers.—CWO4 Natalino A. Carilli, USNR (Ret).

• *Thanks very much for your interesting account of* Delta Queen's *years on active duty with the Navy. We wish you fair winds and following seas in your second career in retirement.*—ED.

Social Security

SIR: I would like someone to explain to me about Social Security. Speaking strictly from a military viewpoint, once a man get over 20 years' active duty he will never realize one cent from Social Security if he takes SBP (Survivors' Benefit Plan) on his retirement.

Now for the man with under 20 years' active duty—if he acquires dependents, he realizes they will have to be provided for should he die. In this case, he normally purchases insurance policies, has D.I.C. (Dependency and Indemnity Compensation) SGLI, and continued free medical care to last while his wife is unremarried.

The way I see it, Social Security will never do a man who retires from the military any good.—PNC R. G.

• *You are mistaken in your belief that Social Security has no benefits for the military member after 20 years' service.*

Under the present law, military members receive the same benefits from Social Security (i.e., old age, survivors, disability and health insurance (OASDHI), as other people who contribute to Social Security. For instance, the member's Social Security annuity is 100 per cent additive to his military retirement annuity.

As for the military survivor benefit plan, this is a program that is a function of each individual member's estate and additional requirements. At present, 49 per cent of the retired military members are participating, whereas only seven per cent participated in the previous program. One of the reasons given by older retirees for not participating is that the size of the Social Security survivors' *benefit is so large in relation to offset military annuity as to make it a poor investment in their individual case.*—Ed.

Other Service Vet

Sir: I have noticed a distinct lack of coverage concerning us OSVETS in All Hands Magazine. As we are a very distinct element of the Navy, I believe that this must be remedied. Therefore, being a man of action, I have taken the liberty of writing the enclosed and submitting it to you for possible publication. I believe it might be of interest, both to All Hands and to all hands; certainly, it would be to all OSVETS. So here goes:

Changing Army khakis for Navy dungarees sometimes leads to intriguing complications, such as the sartorial glory of a full-dress uniform with a hashmark and two rows of medals topped by an Army Combat Infantry Badge—worn by a sailor. At times, this incongruous uniform combination has led observers to believe that the wearer is (a) a fake; (b) a shady character; (c) somebody with a roommate in one of the other services; or (d) either ambivalent or unambitious. It does no good whatsoever to sit the critic down and gently explain to him (her) that you are an OSVET (and why)—the only people who know who OSVETS are, are (1) recruiters; (2) personnelmen; (3) career counselors; and (4) other OSVETS. The only solution to this unfortunate Navywide ignorance is either to stop the OSVET program completely and thus increase the already-considerable confusion or to publish an All Hands article on the subject.

What is an OSVET? Aside from being an Other Service Veteran, an OSVET is:

- Coming onto your first Navy ship and asking directions, only to be told to "take the starboard ladder to the second deck, then head aft three frames to the compartment on the port side," whereupon the OSVET very sensibly retires to the EM club.
- Attempting to explain to an NTC San Diego Company Commander that you aren't a boot and that you don't belong over on recruit side, even though you have to go there to get shots.
- Wondering how you're supposed to tie the scarf for your jumper, when all anybody will tell you is, "Tie a square knot." (Well, that will soon be over.)
- Becoming completely confused over the difference between officers' uniforms and chief petty officers' uniforms. ("Yes, Chief, we always salute the equivalent of chief petty officers in the Army.")
- Getting tired of explaining to people what the Combat Infantry Badge is. ("Yeah, that's my good old Flintlock Qualification Badge, buddy. When I was with General Washington. . . .")
- Asking for directions aboard ship. ("Say, friend, where's the galley?" "Take the starboard ladder to the second deck. . . .")
- Learning to walk to port when the ship is rolling to port. ("Sorry about your coffee, Chief. I'll take care of it right away.")
- Lying awake at night wondering why you ever left the Army. ("Why, why, why, why, why not?")

But finally, being an OSVET is sitting out in the catwalks one evening watching the sun go down, and realizing that you're contented! That's when you quit being an OSVET and start to be a sailor.

—B. J. Keating, USN (formerly SP/5, USA)

- *Welcome aboard!*—Ed.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, Jefferson Davis Highway, Washington, D. C. 20360, four months in advance.

- *Enlisted Aircrewmen and Pilots*, past, present and especially those who have flown combat missions since WW II, who are interested in joining a fraternal organization tentatively named "The Wheelbarrow Club," contact CWO Guy H. Kennedy, Jr., VP 50, FPO San Francisco 96601.
- USS *California* (BB 44)—The ninth reunion is planned for 23-25 July in Chicago, Ill. Contact Harold Bean, National Chairman, USS California Reunion Association, 220 East Pearl St., Staunton, Ill. 62088, telephone (618) 635-3630.
- USS *George Washington* (SSBN 598)—The Blue and Gold 15th firing reunion is planned for 12 July at U. S. Naval Submarine Base Groton, New London, Conn. Contact QMCM John Stellenwerf, USN, Submarine Squadron Two, U. S. Submarine Base, Groton, Conn. 06340, telephone (203) 449-3929.
- USS *New Mexico* (BB 40)—The 18th annual reunion is planned for 3-4 October in San Diego. Contact A. P. Lofurno, 2076 54th St., San Diego, Calif. 92105, telephone (714) 264-5102.
- USS *Pledge (AM 277) Survivors*—Those interested in holding a 25th reunion on 12 October contact Mr. Ralph Gilbert, (PN) Principal, Pierce Elem School, Fort Knox, Ky. 40121.
- *Aviation Support Equipment Technicians*—A reunion is planned for all former and present members of the AS rating 23-25 July at NAS Jacksonville, Fla. Contact ASCM K. J. Cooley, Box 28, NAS Jacksonville, Fla. 32212, telephone (904) 772-2450.
- USS *Flasher* (SS 249)—A reunion is planned for 6-10 August in conjunction with the U. S. Submarine Veterans of World War II 21st National Convention in Nashville, Tenn. Contact A. J. La Pelosa, PO Box 121, 112 Main Street Rear, Bloomingdale, N. J. 07403.
- USS *Ranger* (CV 4)—The ninth annual reunion is planned for 15-16 August in Fort Lauderdale, Fla. Contact Donald S. Rogers, 521 Hazelwood Dr., Oxnard, Calif. 93030.
- USS *Quincy* (CA 39 & CA 71)—A reunion is planned for 29-31 August in Boston Heights, Ohio. Contact Ed. J. Lewis, Box 623, Hudson, Ohio 44236, telephone (216) 653-2296.
- *Third Special USNCB (SeaBees)*—The 25th annual reunion is planned for 22-24 August in Minneapolis, Minn. Contact Mr. Leroy P. Anderson, 2218 Fillmore Street, NE, Minneapolis, Minn. 55418.
- USS *Savannah* (CL 42)—The sixth annual reunion is planned for 5-7 September in Omaha, Neb. Contact Otto J. Jindracek, 63 Thayer Dr., New Shrewsbury, N. J. 07724.
- USS *Wadleigh* (DD 689)—A reunion is planned for this November in San Francisco. Contact Donald Wunderlich, Voltaire, N. D. 58792.
- USS *Aaron Ward* (DD 483)—A reunion is being considered for those who served in her from March 1942 to her sinking on 7 Apr 1943. Anyone interested contact Thomas E. McGinnis, 408 Fairview Ave., Lancaster, Pa. 17603.
- USS *Sterett* (DD 407)—The 1975 reunion is planned for 31 October-2 November. Contact W. W. Langford, 776 Encino, New Braunfels, Tex. 78130.

on the serious side

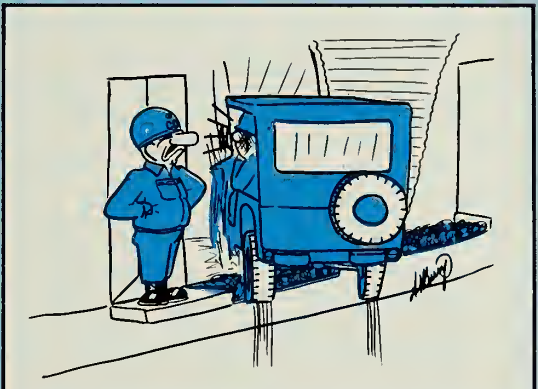
CTASN Robert E. Hobbs, Jr.

GOOD MORNING NAVAL UNDERSEA SYSTEMS MAY I HELP YOU, SIR?
IN
OUT
HOBBS

HMC George P. Brines

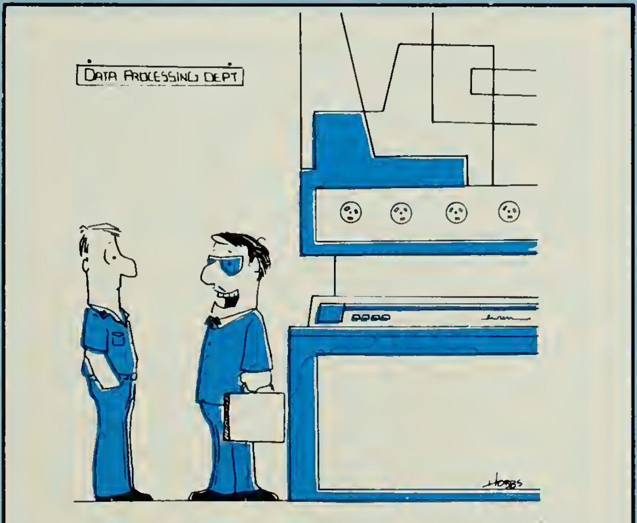
"That's right, Sir, the chief is checking his eyelids for light leaks!"

DK2 Alan L. Berry



"That's quite an entrance, son. Were you trying to see me?"

CTASN Robert E. Hobbs, Jr.



"There you are, Mister Munsen. The X-207-3AZ is installed. This baby can add, subtract, multiply, divide, perform calculus and trigonometry, can duplicate, figure budgets, do paychecks, hold a service record amount of info on over half a million personnel, figure leave, knows 30 languages and can also toast a five-inch square slice of bread in under 10 seconds!"

RM1 Karl J. Arceneaux, USN

"That's not exactly what we mean, Thomas, when we say to 'shotgun department heads.' "

TAFFRAIL TALK

The effect of the shortage of funds, reaching out in all directions, has also hit ALL HANDS. The distribution of the magazine which had been set at one copy for every five persons in the naval establishment, has been reduced to approximately one in six. Ships and units receiving bulk distribution will note this reduction beginning with this issue, and are advised that it is in effect throughout the Navy.

Each unit should take measures to assure distribution as widely as possible to compensate for the reduction. For details on the distribution of ALL HANDS to activities in the naval establishment, check the information which appears in the right-hand column.

Saint Wapniacl? Who's he? You might say this mythical saint was the patron of Navymen seeking advancement in rating back in the 1920s and 30s. Lieutenant D. J. Godsoe, USN (Ret), relates this story:

"Examinations for advancement in rating were not the formalized system now in use. In those days we were examined aboard our own ships or in another ship in the same squadron or division. The examining boards were free to prepare their questions as they saw fit, and the examiners were professionals.

"Some ships were tough and would fail many; others were easy. It is sad to relate, but when the wheel of fortune came around and the hard-marking ship had to send her men to the ship of her former victims, it was sure to be a difficult time and failures were the order of the day.

"When my turn came up for advancement to chief quartermaster, I was in the old *Vega* en route from Manila to San Francisco. The year was 1924. On board as a passenger was a very famous lieutenant—his name? Leland P. Lovette (now a vice admiral retired). He had just completed a tour of duty up the Yangtze River and had achieved considerable fame for his skill as a diplomat and gunboat skipper on the upper river.

"LT Lovette was a big man, jovial and sharp. He prepared a written exam for me and later sat across a green baize-covered table and executed the verbal part. Practical factors were handled by other board members.

"Usually during the oral part of the exams, this question would come up: 'Name the members of the President's cabinet in their order of precedence.' In those years, ST WAPNIACL helped us. We would memorize the secretaries' names with the precedence like this: Secretary of State, Treasury, War, Attorney General, Postmaster General, Navy, Interior, Agriculture, Commerce, Labor. There they are, according to rank—ST WAPNIACL.

"The passed exam was mailed to Washington and, in due time, notification was received that my name was placed on the waiting list for chief quartermaster. That was 1924, and my temporary appointment came in March 1928. One then had to serve at least one year at sea to obtain a permanent appointment as chief petty officer, which I made in August 1930.

"Another examination, as thorough as the original, was also given for permanent appointment. For this one, I had to sit before a board consisting of department heads of the destroyer tender *Black Hawk* at Chefoo, China. This was a long session, and many an acting chief failed this exam . . . a word from his ship would express the wishes of his command."

ST WAPNIACL will not work anymore. The 11 secretaries of today come out ST DAIACLHEWHUDT. Only a fumble tongue can pronounce it! (For this interesting footnote to the history of earlier advancement "orals," our thanks go also to RADM Kemp Tolley, USN (Ret.) for passing on LT Godsoe's recollections.)

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

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DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for approximately six naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.

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At Right: President Gerald Ford addresses the huge audience attending USS Nimitz (CVAN 68) commissioning last month in Norfolk.

Photo by JO2 Jerry T. Atchison, USN.

GRADUATION DAY at ORLANDO for NAVY RECRUITS

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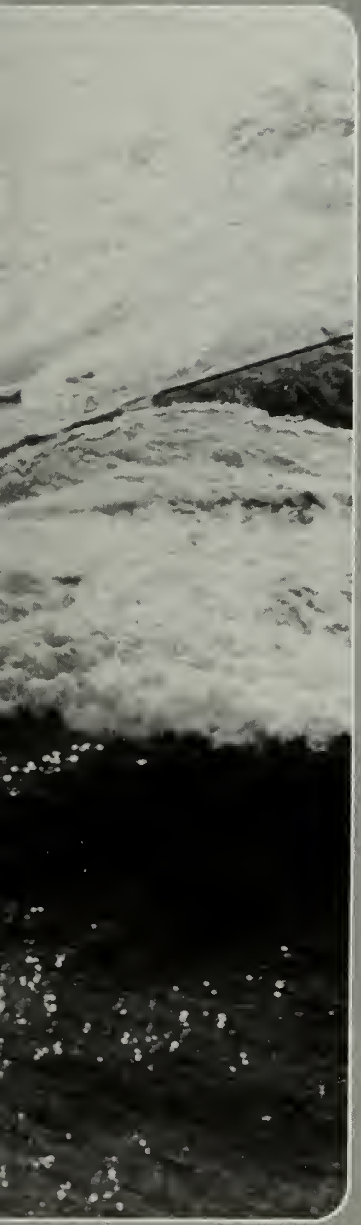

ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

JULY 1975 NUMBER 702

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FRONT AND BACK COVERS: This month, the Navy's policy of one basic uniform for all goes into effect. The cover photos symbolize pride in uniform as the Navy completes its 200th year. For more on the new uniform see the article starting on page 32.

INSIDE FRONT: The recently commissioned nuclear powered sub USS L. Mendel Rivers (SSN 686), underway during sea trials.

ENTE

Return Visit to the INDIAN OCEAN

USS *Enterprise's* return to the Indian Ocean for the first time in four years served to continue American presence in an area in which the Soviet Navy is becoming increasingly well known, as well as to demonstrate the feasibility of U. S. naval forces to operate in any international waters at will.

From the first day she entered the Indian Ocean, the ship was frequently in the news. The ship's deployment there left positive impressions due to a successful port visit to Mombasa, Kenya, and disaster relief operations for the island nation of Mauritius.

The Indian Ocean excursion not only helped to generate international goodwill, but also demonstrated once again the ability of *Enterprise* and her embarked air wing to operate in remote environments. Unlike the South China Sea, the Indian Ocean presented a number of major challenges. Throughout the cruise, flight operations were conducted without having a land-based airfield nearby in case of emergencies. Another major challenge was to prepare for delays that would result from longer and slower supply lines. A third was the ability to operate within the vicinity of nations whose awareness and concern for U. S. military presence were quite different from those of Indochina, and whose military capabilities were much different.

In addition to demonstrating the ability of the U. S. Navy to offset Soviet military presence there, and to meet all challenges, the deployment into the Indian Ocean provided many personal rewards for members of the *Enterprise*-Air Wing 14 team. Not only did crewmembers have an opportunity to visit places seldom seen by most Americans, but many also had an opportunity to participate in disaster relief operations on the

RPRISE

island of Mauritius. Of course, as with most extended operations in a remote area, there were a few personal drawbacks, including infrequent mail service, and a difficulty in leaving the ship on short notice in an emergency.

At the time *Enterprise* was preparing for the Indian Ocean deployment, there was some question whether the ship would be returning to Subic Bay prior to her return to the U. S. To prepare for that possibility it was necessary to stock the ship with tons of extra supplies. High priority materials and equipment were airlifted in. Even extra liberty boats were brought aboard for use in ports where other boats might not be available.

Enterprise left Subic Bay on 7 Jan 1975, and four days later the ship entered the Strait of Malacca, a narrow and heavily traversed channel between Malaya

Facing page: A "diamonds of diamonds" formation during air show for Kenyan dignitaries. Center: USS Enterprise (CVAN 65). Below: RADM O. H. Oberg, departing Commander Carrier Group Seven, greets a Kenyan naval officer at a reception following ceremonies held aboard Enterprise. Photos by PH1 James Lumzer and PH1 R. C. Harrison, USN.

and Sumatra. More than 60 ships were seen during the one-day transit of the strait.

An unfortunate accident occurred on 13 Jan when an EA-6B electronic warfare aircraft crashed into the sea shortly after take-off from the ship. Three members of its four-man crew were rescued, two of them unhurt, one seriously injured, and one was lost.

The following day an F-14A *Tomcat*, the Navy's newest jet fighter, caught fire during flight, forcing the two-man crew to eject. Shortly after the plane crashed into the ocean, both crewmen were picked up by helicopter and were found to be unhurt.

For a detailed report on the F-14A *Tomcat*, see the following pages.

Enterprise crossed the equator at Longitude 84° 30′E on 15 Jan. This occasion marked one of the largest "Crossing the Line" ceremonies ever held. King Neptune and his Royal Court officiated over initiation ceremonies in which 3872 slimy pollywogs were converted into trusty shellbacks. In the accepted, formal and traditional manner, the pollywogs encountered a crew of crusty, free-swinging overseers, whose "special treatment," dunkings, and other indignities are best left to the imagination.

In addition to routine training operations, a number of activities were held aboard ship to break up the monotony of being at sea for days on end. Sporting events such as track and field races, rope climbs, tugs-of-war, weight-lifting, arm wrestling, a boxing smoker, pinochle and cribbage tournaments were held as part of competition for a "Captain's Cup" trophy.

Upon arrival in the vicinity of Diego Garcia on 18 Jan 1975, the ship's helicopters and C-1A carrier onboard delivery (COD) aircraft flew to the U. S. facility there and brought back tons of accumulated mail that had been flown in from the Republic of the Philippines.

A week later *Enterprise* reached an operating area

Top right: Marine color guard presents colors to begin Carrier Group Seven change-of-command ceremony, held on Enterprise, at Mombasa, Kenya. Right: Kenyan Navy personnel admire F-14A Tomcat aboard Enterprise. Facing page bottom: Kenya Naval personnel salute during change-of-command ceremony.

NUCLEAR PROPULSION

It Combines Mobility · Flexibility · Capability

A combination of the flexibility built into her nuclear propulsion system and the capability of the system's operators and technicians enabled the aircraft carrier USS *Enterprise* to meet every one of her operational commitments during its 1974-75 deployment.

Enterprise's eight reactors constitute the most complex nuclear propulsion plant afloat and produce all the steam required by the ship's four main propulsion turbine engines. In addition, the steam is used by turbogenerators to produce electricity for the ship, by evaporators to produce water, by the catapults that launch *Enterprise's* aircraft from her flight deck and by many other types of steam-powered auxiliary equipment.

Flexibility that was designed into the system enables maintenance work to be accomplished at sea without appreciably affecting the operational capability of the ship. At the same time, the high degree of training received by all personnel who operate or maintain the nuclear propulsion system makes it possible for most types of maintenance to be accomplished without outside assistance. On several occasions during this cruise,

in the Arabian Sea near the Persian Gulf, where she continued to conduct flight operations. While operating in this area, an unusually large number of Soviet vessels took a look at the Big E and what she was doing.

Leaving the Arabian Sea at the beginning of February, the ship headed south along the east coast of Africa, and on 4 Feb the U. S. ambassador to Kenya, Anthony J. Marshall, as well as several high-ranking Kenyan dignitaries, visited the ship.

Enterprise entered the port of Mombasa, Kenya, the next morning. It was necessary to anchor four miles away from the city because of the port's shallow water. Thus, the liberty boats brought aboard at Subic Bay were put to good use. For the next four days members of the crew took advantage of the opportunity to relax and enjoy the sights and sounds of the African continent, including tours and safaris into big game preserves.

Following the all-too-short visit to Mombasa, a message was received directing *Enterprise* to proceed to Mauritius, an island nation 500 miles east of the Malagasay Republic (formerly Madagascar). Mauritius had been struck a few days earlier by Cyclone Gervaise, leveling much of the island. The U. S. ambassador there described the storm as the worst to hit Mauritius since 1959.

Arriving at Port Louis, Mauritius, on 11 Feb, teams of men from *Enterprise* spent the next four days rendering assistance to both governmental and private agencies in numerous ways. Prior to the ship's departure, Ambassador Philip W. Manhard visited *Enterprise* and personally thanked the crew for its humanitarian efforts on behalf of the Mauritians.

After sailing from Port Louis on 15 Feb, *Enterprise* returned to the vicinity of Diego Garcia island where she again picked up mail and some supplies. The ship entered the Strait of Malacca on 21 Feb, and anchored in Singapore harbor on 22 Feb. After four days of rest and recuperation, the ship entered the South China Sea and continued on to the Philippines, arriving at Subic Bay on 5 Mar 1975, almost two months after leaving there.

* * *

major maintenance was successfully performed while underway.

The best example of the capability of *Enterprise's* propulsion system during this deployment took place in early February. On 9 Feb 1975, the Big E had completed a four-day visit to Mombasa, the major seaport on Kenya's East African coast, and was heading out into the Indian Ocean to continue the routine operations of the cruise. Shortly after leaving port, orders were received directing *Enterprise* and her task group to proceed at "best speed" to the island of Mauritius, located some 1600 miles to the southeast. Just three days earlier, Mauritius had been stricken by a devastating cyclone.

Enterprise completed that long transit in just over two days, recording an average speed of over 29 knots (about 33 miles per hour). The Big E's conventionally powered escorts were left far behind.

At the conclusion of the 40-day Indian Ocean cruise, Captain Carol C. Smith, Jr., *Enterprise's* commanding officer, said to the crew, "The cruise demonstrated again the value of nuclear propulsion, enabling *Enterprise* to stay on station far from supporting bases for a long period of time, as well as to maintain a high sustained speed over a long distance while en route to Mauritius."

Completing major maintenance while underway and making a high-speed transit in a distant ocean are two recent contributions to the tradition of performance by *Enterprise's* nuclear propulsion system, which now has over 13 years of service and more than 850,000 miles of steaming to its credit.

F-14 TOMCAT

First Deployment with Enterprise

With the end of an extended deployment to the Western Pacific and Indian Ocean in sight, USS *Enterprise* and Attack Carrier Air Wing 14 have witnessed the successful deployment of the Navy's newest jet fighter aircraft, the swing-wing F-14A *Tomcat.* Flying the F-14s on their first operational deployment were the "Wolfpack" of Fighter Squadron 1 and the "Bounty Hunters" of Fighter Squadron 2.

The introduction of a new fighter aircraft into operational fleet squadrons is normally a slow process accompanied by numerous, unanticipated problems which severely limit the amount of flying. By comparison to its predecessors, the *Tomcat* rapidly progressed through the fleet introductory phase.

During the current deployment alone, VF-1 and VF-2 amassed a total of over 1700 sorties between them. This enviable record is the product of an advanced technology aircraft coupled with realistic long-range planning and, in the final analysis, a lot of hard work by the aircrews and maintenance personnel within the two squadrons. VF-1 and VF-2 have comprehensively documented their "lessons learned" throughout the cruise, and the experience of the first *Tomcat* deployment will be of invaluable assistance to future F-14 squadrons.

VF-1 and VF-2 operated the F-14 in the South China Sea, the Gulf of Tonkin, and the Indian Ocean, and conducted limited shore-based operations from NAS Cubi Point, R. P. The period in the Indian Ocean was the longest sustained operation at sea of the deployment and proved conclusively that a carrier task force with F-14 aircraft could operate thousands of miles from major shore support facilities or air bases.

Although no actual combat missions were flown during this peacetime deployment, VF-1 and VF-2 flew daily training sorties designed to sharpen the fighter skills required of aircrews in combat. Gunnery, air combat maneuvering, radar intercept training and escort missions were flown day and night and frequently under adverse weather conditions. All missiles, including *Sidewinder*, *Sparrow*, and the new long-range *Phoenix*, were fired in realistic operational environments during sorties flown from *Enterprise.*

Numerous missions were devoted to air intercept training using the unique multiple tracking and long-range detection capabilities of the AWG-9 radar and associated weapons systems of the F-14A. The intercepts were controlled by the E-2B *Hawkeye*, an airborne early warning aircraft also deployed aboard *Enterprise*, and by air intercept controllers aboard *Enterprise* and other ships in the task group. A majority of these intercepts were conducted using the Airborne Tactical Data System (ATDS) with the E-2, or the Navy Tactical Data System (NTDS) aboard ships. The use of this digital data link system enables the completion of an intercept without the aid of conventional voice transmissions. The F-14 crews have become proficient in this new tactical capability, which shows great promise for increased efficiency and security in the future.

The fleet superiority concept was introduced on this deployment to complement the introduction of the F-14A. Fleet superiority is a project to develop tactics and procedures for integrating air, surface, and subsurface assets against various naval and air threats. The principal motivating factor for the fleet superiority project was the efficient tactical integration of the F-14A/AWG-9/*Phoenix* system with other fleet systems. The project recognizes that to realize the full potential of the *Tomcat*, the tactical interfaces with such systems as the E-2B and EA-6B aircraft must be carefully defined. Tactical procedures were developed and the fighter readiness of VF-1 and VF-2 were evaluated in numerous fleet superiority exercises.

In addition to these areas of tactical preparedness, much experience was gained in the flight characteristics of the F-14, with the two squadrons amassing a total of over 2900 flight hours and 1600 arrested landings.

"The experience and proficiency gained by the *Tomcat* crews in operations aboard *Enterprise* were the final stroke to complete the successful picture of introducing the F-14 to the fleet," says Commander Jimmie W. Taylor, VF-2's commanding officer. "We have fully proven the F-14 in the most demanding of all aviation environments: carrier aviation."

The handling qualities of the F-14, such as its exceptionally slow-speed capabilities and quick-turning characteristics, were continuously explored in an effort to obtain maximum performance from the aircraft. The aircraft was routinely operated at speeds ranging from 110 to 120 knots for landing and slow speed maneuvering to speeds approaching twice the speed of sound.

The first operational deployment of the twin-tailed fighter has additionally tested the maintenance and logistics system for supporting this sophisticated weapons platform. From every flight, extensive data was collected and analyzed for the purpose of improving the supportability, maintainability and reliability of the aircraft. "Line reports" were compiled by the squadrons for each at-sea period to summarize the major events, document the allocation of sorties, maintenance actions, and maintenance hours, and provide lessons learned. The reports were given wide distribution. Data analysts were also employed to compute and document such variables as maintenance actions per sortie and per flight-hour, and maintenance manhours for each flight hour. The maintenance effort of both squadrons steadily and significantly improved throughout the deployment and demonstrated that the F-14 is readily maintainable in the fleet.

Says Commander Dennis S. Strole, commanding officer of VF-1, "For the first time, the Navy has a fighter that matches the potential and versatility of the nuclear carrier, the threat, and the Navy fighter crews. Simply put, what we have found is that the F-14 has proven highly capable of performing all of its missions within the unique context of the carrier task force."

—LT Steve Miller, USN

Facing page: F-14A Tomcat prepares to launch during suitability trials. Below: F-14 comes in for recovery aboard Enterprise. (Photo by PH3 Harold Brown). Right: F-14 undergoing carrier suitability testing. Photo by PH2 Terry C. Mitchell.

ENTERPRISE SUPPORTS VIETNAMESE EVACUATION OPERATION

Aircraft from USS *Enterprise* flew 95 sorties in an 18-hour, day and night operation in support of the evacuation of Americans from Saigon on 29 and 30 April 1975. The primary mission for most aircraft from the Big E was to provide air cover for the helicopters ferrying evacuees from Saigon to other U. S. aircraft carriers standing by in the South China Sea.

Throughout the operation, *Enterprise* was stationed about 90 miles from the South Vietnamese coast, well outside the country's territorial waters.

No evacuees were brought aboard *Enterprise*.

From the Enterprise Crew . . .

Questions &

Q. How do you feel about the Indian Ocean operation?

LTJG Richard C. Barkell, VF-1 intelligence officer: I personally feel that our deployment to the Indian Ocean was a continuation of recent U. S. naval operations exhibiting the mobility of a carrier task force. In addition, recent increased Soviet naval presence in major Middle Eastern oil transportation sea-lanes necessitate a show of the United States' flag to Indicate our capabilities should the need arise. *Enterprise's* quick response to the disaster-stricken island of Mauritius was indicative of our quick-reaction capability.

LCDR Ed Allen, VF-1 naval flight officer: The USS *Enterprise* task force deployment to the Indian Ocean was a unique experience and highly successful. *Enterprise* and Air Wing 14 conducted day and night flight operations over the calm seas in a no-divert environment. Other than the no bingo (divert landing field) restriction, air operations were conducted pretty much as normal. The deployment demonstrated the advantages of a carrier task force to operate out of normal range of land-based support and emergency divert fields.

CWO2 Downs: From a maintenance standpoint, I had some misgivings. Fortunately, we were able to fly enough to maintain crew proficiency without going back to an extensive training cycle.

Q. Was there anything particularly different about operating in the Indian Ocean?

LTJG Dennis Ferrell, VAW-113 pilot: One thing, the weather seemed to be a lot better than in the South China Sea.

Q. How do flying conditions in the Indian Ocean differ from conditions in the Med. or WestPac?

CDR Robert P. Nichols, VA-97 executive officer: They were the best I've ever seen. The clear skies and calm sea conditions greatly relieved concern over the absence of bingo fields.

LT Robert P. Vincent, VF-1 pilot: It is characterized by smooth water, good weather and clear skies. Flying a routine training mission did not differ from any other mission flown elsewhere except for the ever-present fact of no bingo field. This did not affect the capabilities of the F-14 but it did have a slight psychological effect on the aircrews. Knowing you have to get aboard and there is no other place to go puts that little extra excitement into the routine mission and especially into the night recoveries.

Q. What did you find to be the E-2 Hawkeye aircraft's primary mission in the Indian Ocean?

LTJG J. P. Simpson, VAW-113 naval flight officer: Even though airborne early warning continued to be significant, emphasis of the *Hawkeye's* mission shifted from anti-air warfare to surface surveillance. The E-2's long-range radar and high altitude were ideal in the Indian Ocean for detecting and tracking surface contacts long distances away from the carrier task force. Using A-7 attack aircraft, we were able to control several sections over many surface targets, thus providing the ship with an accurate surface picture hundreds of miles from its location and beyond its radar horizon. It is particularly important in this age of long range antiship missiles to identify and track those ships that are a possible threat to the carrier task force.

Q. How did operations go with the F-14 "Tomcat" on this deployment?

LTJG Simpson: I think we have proven that the E-2/F-14 team is a viable Fleet air defense concept. VAW-113 is the first operational E-2 squadron to work out the compatibility problems between the *Hawkeye* and *Tomcat*. We have greatly improved the survivability of the carrier task force in a hostile air environment by combining the search, detection and intercept capabilities of the two aircraft. For the first time the E-2 has the capabilities of automatically receiving the targets visible to the F-14's radar, thus effectively increasing the detection range of the carrier task force to distances unheard of before and giving the task group commander more time to formulate his response.

Q. Was surveillance of merchant shipping as well as warships one primary mission in the Indian Ocean?

CDR Nichols: Yes. The SSSC (surface, subsurface, surveillance and control) mission was quite interesting. It demonstrated the wing's ability to identify all surface shipping in a 150-mile circle (about 70,000 square miles) in under two hours, photographing most of the ships.

Q. How did not having regular supply lines affect the operations of the E-2 in the Indian Ocean?

LTJG Simpson: Actually, not very much. We had excellent aircraft availability, primarily because of our excellent maintenance department. It should be noted that we were forced to sacrifice one aircraft for parts to keep the others operating.

Q. What was the significance of having no bingo fields during this operation?

CDR Nichols: It was my first encounter with sustained flight operations without the support of a

Answers

nearby bingo field. That was partly the reason for such operations, to show the unique capability of a carrier task force to bring its power to bear in any part of the world without relying on shore-based installations.

Q. Performance is often a result of good morale. How did you find morale on extended operations in the Indian Ocean?

CDR Nichols: Morale remained high because we were flying regularly and everyone felt that we were accomplishing our mission.

Q. How do you feel the extended operating period, with little liberty, affected morale?

CWO Downs: We've never had a problem so long as the crew knew the objective of the mission. Our crew has always performed at 110 per cent. The amount of work helped too because we were able to stay busy. While being in such an isolated area, receiving mail becomes about the most important aspect of life.

Q. What was liberty like in Mombasa, Kenya?

LT Vincent: We enjoyed our stop in eastern Africa's major seaport. Although it isn't a big city, plenty of good sights, good food and some not-so-cold beer were available. Probably the most interesting time to be had in Kenya was a visit to Tsavo National Wildlife Park via one of the local safaris. In two days we covered over 500 kilometers in the 8000-square-mile game refuge and took many slides of the wildlife.

LTJG BARKELL: The port call at Mombasa was certainly pleasant. The country offers a diverse array of sightseeing and recreational activities and as a result is frequented by many vacationing Europeans. The safaris to various game preserves were a definite highlight of our visit. Hopefully, future carrier deployments to the Indian Ocean will open up additional liberty ports for visits.

AT2 James E. Boyd: Here's how I would sum up liberty in this spot—the beaches are among the most beautiful and peaceful I have ever had the pleasure to see and sink my feet into with their white, cooling sand. And in the nearby countryside—the elephant, lion and gazelle roam free and unhindered. This combination was at once exhilarating and yet peacefully serene. I would wish to go again to this beautiful little country of Kenya.

The thing that struck me most about the Indian Ocean was the stillness and quietness that seemed to pervade when we weren't in flight operations. The temperature was a little hotter than in the South China Sea, but the calm seas and no-wind conditions were almost eerie.

On a Photo Safari In Kenya

From top: Enterprise crewman photographs a large anthill common to Tsavo National Park, and some of the park's inhabitants: baboon, giraffe, zebras and elephant. Photos by JO3 D. N. Fulghum, USN.

The Navy's Role in the EVACUATION of VIETNAMESE REFUGEES

The role of the U.S. Navy in the rescue and evacuation of American and Vietnamese citizens from South Vietnam was a heroic and humanitarian endeavor. President Ford, in a message to the fleet via the Secretary of Defense, said of the evacuation:

"Please convey to all personnel involved in the Vietnam evacuation operation my appreciation and respect for their superb performance.

"This operation was carried out under extremely adverse conditions. Its smooth and orderly accomplishment reflects great credit upon the men and women who participated in its planning and execution.

"I also join with their comrades in mourning the loss of those gallant men who gave their lives in this humanitarian task. To their families and loved ones goes our deepest sympathy.

"Their sacrifices, as well as the courage and determination of all participating units, stand as a final example of the selfless dedication which has typified the performance of our armed forces throughout our involvement in Indochina.

"They have my gratitude and that of the American people for the successful accomplishment of this difficult mission."

The untiring efforts of the Navy and Marine Corps personnel who assisted in that final exodus cannot be adequately summarized in a few short paragraphs. The whole story of the evacuation—of the ships and men who made it possible—will take weeks to tell because of the complexity of the operation and the number of people involved.

What follows is a series of capsule summations of "how it was" as seen mainly through the eyes of some people who were there.

First U. S. Ships To Pick Up Refugees

The amphibious cargo ship USS *Durham* was with the first U.S. Navy ships to pick up refugees. *Durham's* crew, both Navymen and Marines, worked day and night during the evacuation to bring aboard and care for mre than 3800 refugees rescued near Phan Rang. Included among those rescued were some 80 which had been evacuated by USS *Frederick* and then transferred to *Durham.*

For two days and two nights, *Durham's* holds were transformed into makeshift dormitories for the homeless people. Food was specially prepared and medical teams treated the sick and wounded.

While the *Durham* crew cared for the refugees aboard their ship, *Frederick, Blue Ridge* and *Dubuque* did their part by providing food which they had aboard to U. S. Military Sealift Command merchant ships carrying thousands of other refugees. Foodstuffs were transferred by ships' boats and helicopters. The refugees had been forced to remain aboard the merchant ships for long periods because of lack of unloading facilities at the designated safe havens.

The crew of USS *Dubuque* was particularly instrumental in helping refugees at Phu Quoc. Her boats were used to not only transfer food and water to the helpless evacuees, but also to transport medical teams to the U. S. ships waiting to be offloaded.

Together the crews of these four ships, working virtually around the clock, saved many refugee lives which otherwise might have been lost.

Given a new lease on life, 3586 refugees were transferred on 5 April from the amphibious cargo ship *Durham* to *Trans Colorado.* The movement of the displaced persons to *Trans Colorado*, an American heavy lift merchant ship, was made off the coastal city of Vung Tau.

The transfer of Vietnamese, who were carried to safety, came after *Durham* spent Thursday and Friday taking evacuees aboard near Phan Rang.

Bleary-eyed and weak, the Vietnamese were given hot meals, shelter and emergency medical care aboard

Durham. Navymen and embarked Marines on the ship worked around the clock to tend to their needs. The transfer went smoothly as the revived evacuees were shuttled from the Seventh Fleet amphibious ship to the merchant vessel.

Before the transfer, the refugees received a hot meal and were provided a bag of rice to take with them. *Durham* also sent some canned foods and fruits to *Trans Colorado* to help feed the refugees. Each family thanked the American Navymen and Marines as they left *Durham*.

The *Durham* crewmembers continued to show their concern for the welfare of the refugees as they formed a human chain to help lift the Vietnamese and their belongings aboard *Trans Colorado*.

USS *Blue Ridge* also transferred some 11,000 meals to *Trans Colorado* for use by the evacuees from *Durham* and other refugees that were taken on later.

Helicopter Airlift Aboard Blue Ridge

All eyes turned to the horizon as two helos made their way to *Blue Ridge*. They were Air American helicopters, full of women, children and what few belongings they could gather together before fleeing Saigon. The passengers were unloaded and sent through evacuee processing stations set up on the main deck. In order to make more room, another helicopter which had carried a Vietnamese pilot to safety was lifted from the main deck and flown a couple of hundred feet from *Blue Ridge*, where it was ditched.

Suddenly the sky seemed to be full of helicopters, all of them crammed with refugees.

With rotors turning, the second Air American helo prepared to return to Saigon for more evacuees. One of the hbvering helos, only a few feet off, disregarded flight deck crewmen's orders to move away. Despite the efforts of the crewmen frantically waving their arms trying to ward the helo off, it continued toward the landing platform. At the last possible moment, the crew headed for cover, knowing what was going to happen. Shouts came from every direction, "Hit the deck! Hit the deck!" Sailors threw themselves over Vietnamese children, protecting them with their bodies.

The South Vietnamese craft set down on the very edge of the port side, but still there was not enough room. Rotor blades clashed together and exploded into thousands of pieces. The helo jumped and twisted viciously as pieces of the blades hit the flight deck. Some 30 *Blue Ridge* crewmen jumped up from the main deck and ran to the battered craft from which they began carrying children and helping the terror-stricken passengers to safety.

As soon as the deck was cleared, the other helicopters came in to unload their passengers. There was no room to keep helos aboard. As soon as they were unloaded, they were flown off the ship and ditched into the sea. Their doors were chopped off to allow the pilots an easy exit.

One Vietnamese pilot repeatedly faced death as he climbed into the cockpit of five copters in a row and dropped himself and the chopper into the sea. Each time, he was picked up by boat crews and returned to the ship.

If the helos weren't ditched, they were pushed over the side, breaking off antennas as they plunged into the sea. Throughout all of these events, it was a wonder that not one was injured. Yet not one pilot or any of the crewmen working on the main deck was hurt in the rescue operation.

All through the frantic landings and ditchings, the voice of the commanding officer, Captain William D. Hart, would come over the general announcing system and say, "You're doing a marvelous job. I'm proud of you all. Just remember to watch yourself, be careful and stay cool."

Over 40 ships and 70 helicopters took part in the world's largest helicopter evacuation. *Blue Ridge* was the hub of the massive airlift that brought thousands of Americans and Vietnamese out of the beleaguered city of Saigon.

Helping Hands: Preparations

"I can't say enough about the tireless and selfless efforts that our Navymen and Marines have expended to relieve the suffering of these people who have been forced to flee their homes," said Rear Admiral Donald B. Whitmire, evacuation coordinator.

That task began on Easter Sunday when ships of the Seventh Fleet Amphibious Force, responding to President Ford's directive to get aid to Vietnam refugees, sailed for the coastal country. USS *Blue Ridge* (LCC

Facing page: Nhu-Dung, age 14, serves rice to fellow refugees at Asan, Guam. Photo by PH2 K. Hacka. Below: Vietnamese men carefully pass a child from boat to men of USS Durham, (LKA 114). Photo by PH3 H. Brown.

19) and USS *Dubuque* (LPD 8) sailed from Okinawa while USS *Durham* LKA 114) and USS *Frederick* (LST 1184) got underway from Subic Bay in the Philippines.

Throughout the ships a special sense of purpose was evident as sailors and Marines carried out their duties. Commissarymen kneaded dough until the small hours of the morning as loaf after loaf of piping hot bread emerged from the ships' ovens. Hospital corpsmen inventoried medical supplies and stocked shelves.

Early Thursday afternoon, 3 April, the purpose of the voyage became a reality as a 20-foot South Vietnamese motor launch carrying 21 refugees plowed through the choppy seas toward *Durham*. The humanitarian mission was underway and from that moment it took on a meaning far deeper than any duty assignment could instill in that crew.

The first group of 21 refugees were hardly settled when a flood of their countrymen followed in sampans and junks. Boats of every size, shape and description converged on the amphibious cargo ship. Each was filled with men, women and children carrying what they could of their possessions. Old and young, some with suitcases or bundles, some clutching nothing but hope of a new life.

As *Durham* moved in closer to shore, she seemed to ignite a spark of hope into the hearts of the refugees. They crowded around the ship, and pandemonium reigned as boats jockeyed for position. American sailors stood on the accommodation ladder to help as the boats came alongside.

Getting the people aboard wasn't an easy task as the small craft rocked and rolled in the heavy seas. The occupants were all soaked to the skin—but they didn't seem to mind.

Military Sealift Command

President Ford's order of 29 March for "American Naval Transports and Contract vessels to assist in the evacuation of refugees from the coastal seaports" of northern South Vietnam had an immediate effect on several ships under contract to the Navy's Military Sealift Command.

A small fleet of cargo ships, tugboats and barges operating near Vietnamese waters began an around-the-clock evacuation of refugees. Under difficult and hazardous conditions, the participating ships rescued thousands of South Vietnamese during the first days of operation.

SS *Pioneer Contender*, operating under an MSC contract, USNS *Sgt. Andrew Miller*, a Navy-owned transport, and SS *Trans Colorado*, a Sea Train Line ship, rescued more than 35,000 refugees from Da Nang alone.

The refugees were ferried from shore by tugs, barges

Counterclockwise, from left top: Boatswain's Mate 2nd Class T. Elsbree, USS Durham, takes care of Vietnamese baby while search is made for its mother who was separated from it during evacuation. Photo by PH3 H. Brown. Dr. Kenneth Cox administers to a Vietnamese baby. Photo by PH2 K. Hacka. Loon Keefer rests with her son, John, Jr., the first refugee baby born on Guam. Photo by PH2 K. Hacka. Grande Island and its refugee tent cities as seen from the air. The three tents in center are football-field size. Photo by PH1 S. Harris. Guided missile destroyer USS Benjamin Stoddert. Far right: A Vietnamese woman is escorted from helicopter across the deck of USS Durham. Photo by PH3 H. Brown.

and any other small craft available. Additionally, many more escaped aboard towed barges as the Communist forces moved ever closer on their trek down the coast.

USNS *Miller* rescued more than 15,000 refugees while USNS *Greenville Victory* transported 7000. By the end of the first week, nine MSC ships, four tugs and four Navy Amphibious Transports had been committed to the humanitarian evacuation.

The Ships That Helped

The U. S. Navy ships supporting the humanitarian evacuation and their mission:

- Evacuation/medical assistance and emergency supplies—USS *Durham* (LKA 114), USS *Dubuque* (LPD 8).
- Emergency supplies and medical assistance/care—USS *Blue Ridge* (LCC 19), USS *Vega* (AF 59), USS *Frederick* (LST 1184), USS *Benjamin Stoddert* (DDG 22), USS *Cochrane* (DDG 21).

MSC ships and ships under MSC contract involved and the number each evacuated:

USNS *Sgt. Andrew Miller*—15,300; USNS *Greenville Victory*—7000; SS *Pioneer Commander*—16,000; SS *American Challenger*—10,000; SS *Trans Colorado*—12,000; SS *Greenport*—7000; *Boo Heug Pioneer*—5000; *Chitose Maru*—2600.

Almost all refugees were transported from shore to ships by small vessels, tugs with barges in tow, and Korean LSTs. Other Navy and MSC ships which aided in the evacuation may have been omitted, because reports were not complete as ALL HANDS went to press.

Birth at Sea

On 3 May, two U. S. Navy hospital corpsmen delivered a baby boy aboard a refugee-packed ship en route to Grande Island in Subic Bay. Hospital Corpman 1st Class James Cooley and Hospital Corpsman 2nd Class Larry Lyons delivered the child beneath a makeshift

shelter on the deck of USNS *Truman Kimbro*, a MSC ship.

"We were out in the middle of the Pacific Ocean, so there was nothing we could do but deliver," said Cooley. "We roped off a place on the port deck, cleaned it and put up ponchos for shade," explained the corpsman.

"The ship's sickbay was full and overflowing."

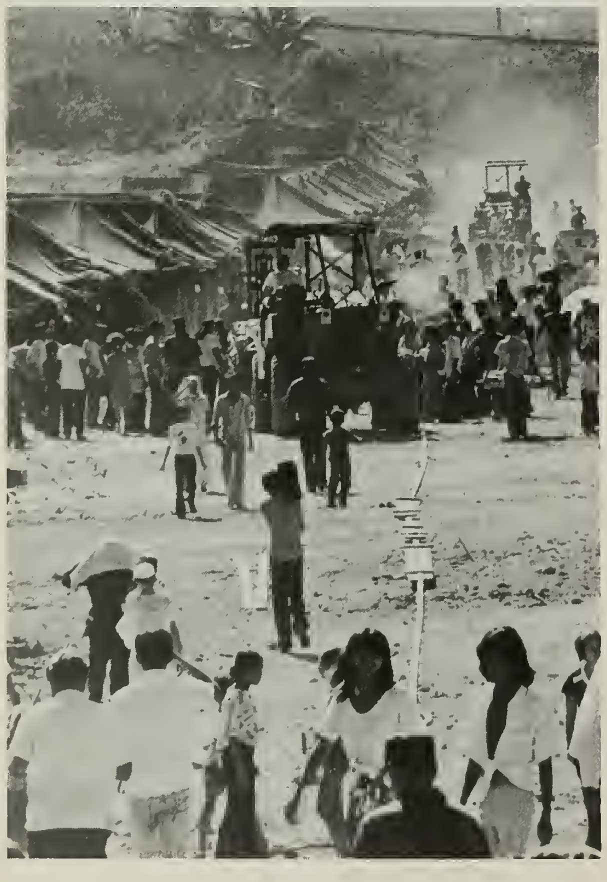
Lyons, who had never delivered a baby before, just followed Cooley's instructions and "took things as they came." "The childbirth kind of made the trip special as far as I'm concerned," said Lyons. "It made me feel real good to see the mother and baby all right."

Last Warship to Leave Vietnam

The last U. S. Navy warship to leave Vietnam arrived in Subic Bay, Republic of the Philippines, on 6 May, carrying 177 South Vietnamese refugees. Among the refugees aboard USS *Benjamin Stoddert* were remnants of the crew of a South Vietnamese navy gunboat.

"We received an SOS from a PGM (gunboat) that said they were out of fuel and leaking badly," said the ship's captain, Commander Peter Hekman. "When we found the boat in the Gulf of Siam, it was in bad shape." Six officers, one woman, four children and eight enlisted sailors were aboard.

After this rescue, the Pearl Harbor-based destroyer spied a fishing boat in the South China Sea. Its occupants, 158 people of whom 80 were young children, were out of fuel and food. *Stoddert* took them aboard



and proceeded to the American naval base in Subic Bay.

Building a Process Center

During the height of the massive airlift, almost 5000 evacuees arrived on Grande Island in the mouth of Subic Bay. They were housed in tents and the island's few cabins while being processed for eventual entry into the U. S.

Before the Vietnamese refugees arrived, Marines and Seabees erected hundreds of tents, built a chain link security fence, installed security lights and built almost 200 toilets on Grande Island. The massive undertaking was a part of Operation New Life and Project Frequent Winds, the evacuation and processing of Americans and Vietnamese.

The Battalion Landing Team (BLT) 1/4 Marines, based in Okinawa, and the Seabees from CBMU 302, based at Subic Bay, and Port Hueneme, Calif.-based Naval Construction Battalion 40 worked side by side throughout the operation.

Tent City

The concerted efforts of military and civilian volunteers from all over Guam were responsible for erecting "Tent City," formerly Orote Point, Guam. Working for two straight days without rest, Navy Seabees drove more than 18,000 tent stakes through the coral layer, just three inches below the island's surface. The result was the erection of more than 1000 14-man tents which housed civilian volunteers, military personnel, Red Cross workers and 6000 Vietnamese refugees.

While Seabees erected temporary housing, a portable kitchen fed 1000 persons an hour and Red Cross workers assisted refugees in contacting and receiving telegrams from their relatives and sponsors located around the globe.

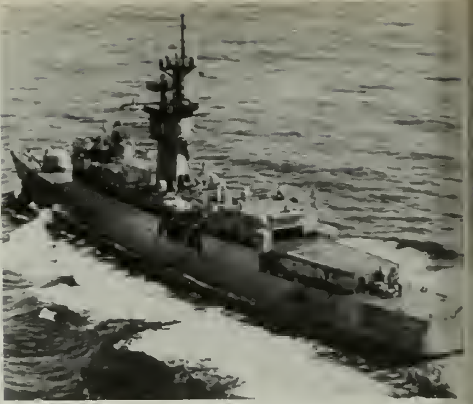
Nine teams of 50 Seabees each worked nonstop to erect the facilities on the island. Their humanitarian efforts were part of Operation New Life—the military coordinated feeding, housing and clothing of Vietnamese evacuees—under the command of Admiral Noel A. M. Gayler, Commander in Chief, Pacific.

This roundup of what happened in the Vietnam evacuation is by no means all-inclusive. There are hundreds of incidents deserving of mention that simply can't be included in this account owing to the limitations of space. In future issues of ALL HANDS we hope to cover in more detail the role of the Navy in this spectacular effort.

—Story by the journalists and public affairs officers who served during the evacuation. Collected and coordinated by JO2 Dan Wheeler.

Facing page left: "Tent City" at Orote Pt., Guam, springs to life as thousands of South Vietnamese refugees set up housekeeping. Photo by PH3 S. Stuart. Facing page top: After 49 hours of work, a weary sailor seeks respite among a pile of tents in an abandoned field now coming to life with more than 6000 refugees. Photo by PH3 S. Stuart. Left: Vietnamese refugees aboard a landing craft from USS Durham, en route to merchant marine ship Trans Colorado. Photo by PH3 H. Brown. Above: Refugees serve refugees in a field kitchen at Asan, Guam. Photo by PH2 K. Hacka.

The Mayaguez Incident



In Today's World– An Example of the Importance of Seapower in a Crisis . .

It was a classic display of seapower and a reaffirmation of the freedom of the seas. It couldn't have come at a more significant time.

The freeing of the American container ship ss *Mayaguez* and her 39-man crew from the midst of her Cambodian captors the night of 14 May recalled an action that occurred 171 years ago—the performance of Stephen Decatur and his shipmates who burned the frigate *Philadelphia* in Tripoli harbor on 14 Feb 1804, to keep it out of pirates' hands.

The sagas of *Mayaguez* and *Philadelphia* also have another parallel. They were both victims of actions that violated the laws of the sea, taken by people who banked heavily on Uncle Sam sitting back and doing nothing. Lord Nelson called the *Philadelphia* incident "the most daring act of the age." The most recent operation involving *Mayaguez* was an achievement combining heroism, teamwork and mobility. The Navy, Marine and Air Force units involved conducted a "cutting out" expedition just as such a venture should be accomplished: fast, successfully and with a minimum of casualties.

It all began the morning of 12 May when the unarmed *Mayaguez*, en route from Hong Kong to Singapore, with a stop at Sattahip, Thailand, was fired upon and seized by the crew of a Cambodian gunboat in the Gulf of Siam. The capture took place 60 miles off the Cambodian mainland and about eight miles from the small, rocky Tang Island, claimed by both Cambodia and South Vietnam.

A spokesman for Sea-Land Service, Inc., owner of *Mayaguez*, said the vessel was carrying a general cargo in 35-foot and 40-foot containers. The 14,500-ton, 480-foot-long ship normally operates between Hong Kong, Thailand and Singapore, he added.

Calling the seizure "an act of piracy," President Ford met with the National Security Council. He also instructed the State Department to demand the immediate release of *Mayaguez*, adding that "failure to do so would have the most serious consequences."

While the United States took immediate action on the diplomatic front, it did not stop there. There was no response to the early efforts to communicate with the Cambodian government. The Khmer Rouge regime, the former rebel Cambodian government, which had taken over on 12 April, had to a large extent isolated itself from the outside world. At the same time it was expanding its territorial claims in an ocean area believed to contain undersea oil deposits. Foremost in the minds of Americans was the threat of another *Pueblo* incident.

Shortly after word of the *Mayaguez* seizure reached Washington, U. S. reconnaissance planes were ordered into the area. About the same time, the aircraft carrier uss *Coral Sea* (CVA 43) was diverted en route to Australia and ordered to the Gulf of Siam. Other Seventh Fleet ships, including destroyers, were also directed to steam toward the gulf. Simultaneously, U. S. Marines were alerted.

The night of 13 May, President Ford called for a meeting of the National Security Council, the third time in two days, to consider options on how to recover the merchant ship *Mayaguez*, still held in the Gulf of Thailand, 30 miles off the coast. In the meantime, American aircraft continued surveillance which was made difficult at times by heavy cloud cover. During this reconnaissance, a Navy P-3 *Orion* dove through the cover for a better view of *Mayaguez* and subsequently took one round of small-arms fire, but no one was injured.

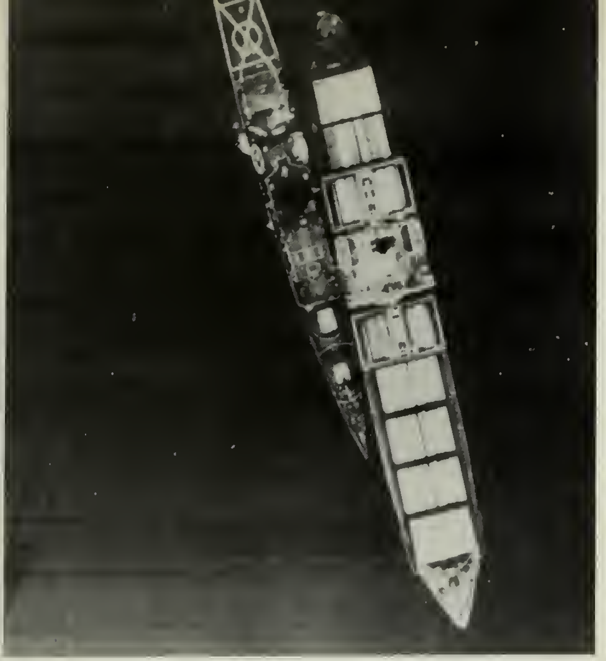
Finally came President Ford's order for air strikes, to coincide with Marine landings on Tang Island, and a Navy effort to regain the merchant ship *Mayaguez*. The three-pronged assault was underway.

Marines were helicoptered to uss *Harold E. Holt* (FF 1074) and then stormed over the rail when *Holt* drew alongside *Mayaguez*. The quick action had taken the captors by surprise—still-warm food was the only sign of their earlier occupancy.

Other Marines, flying in helicopters from bases in Thailand, landed on three-mile-long Tang Island under fire from Cambodians. Jet fighter-bombers from uss *Coral Sea* also attacked the island in support of the Marines.

This Marine operation came hours after U. S. Air Force planes destroyed several Cambodian patrol boats. American A-7 jets and AC-130 gunships operating from bases in Thailand strafed the patrol

Above: USS Harold E. Holt (DE 1074). Right from top to bottom: aerial photo taken as USS Holt pulls alongside SS Mayaguez. U. S. Marines board Mayaguez. Photo by YN3 Michael Chan. Marines raise American flag aboard Mayaguez after her rescue. Photo by YN3 Chan.



boats after there were "indications that the Cambodians appeared to be attempting to move captive American crewmen from the ship and the island to the mainland," the Pentagon said. The *Mayaguez* crewmen were known to have been taken off their ship to the island soon after their capture and the Marines were seeking to rescue any still on the island.

It was learned later, however, that *Mayaguez* crewmen had been taken off the ship to Tang Island, but were moved again, first into the port of Kompong Som and then onto another island named Rong, by a small Cambodian gunboat that escaped destruction when an American pilot, swooping down on the 32-foot craft, spotted what he thought were "Caucasian faces" and the craft was permitted to continue to Kompong Som. The jets destroyed the three other gunboats.

The Cambodian government had not yet responded until the U. S. military operations were well underway. The United States received the first Cambodian government statement—after the air strikes and after USS *Harold E. Holt* had come aside *Mayaguez* and Marines had boarded her. The statement offered to return *Mayaguez*. There was no mention of returning the crew.

Shortly after 0700, Thursday morning, 15 May, the first Marines landed on Tang Island.

At 0820 that same morning, the crew of *Mayaguez* was hurriedly loaded into a small boat with five Thai sailors and told to start on their way back to *Mayaguez*. The U. S. forces were not notified of their departure.

While the American merchant ship crew in the small Thai fishing boat were heading back to the location of *Mayaguez*, the first of two waves of Navy jet fighter bombers that had taken off from the attack carrier *Coral Sea* were in the process of bombing the Cambodian airfield at Ream near Kompong Som, according to Pentagon records. Other American jets hit warehouses and railroad marshaling yards in Kompong Som port, oil refineries and oil storage facilities three miles north of the city and a naval barracks at Ream.

At 1045, the guided missile destroyer USS *Henry B. Wilson* (DDG 7) spotted a small boat flying white flags. It was the *Mayaguez* crew and the five Thai fishermen, whose boat had been captured earlier by the Cambodians. They were picked up by *Wilson* shortly thereafter.

The 14-hour *Mayaguez* operation ended successfully at 2110 Cambodian time, Thursday, 15 May, when helicopters, under protection of aircraft and naval gunfire, lifted the last Marines off Tang Island and onto the deck of USS *Coral Sea*.

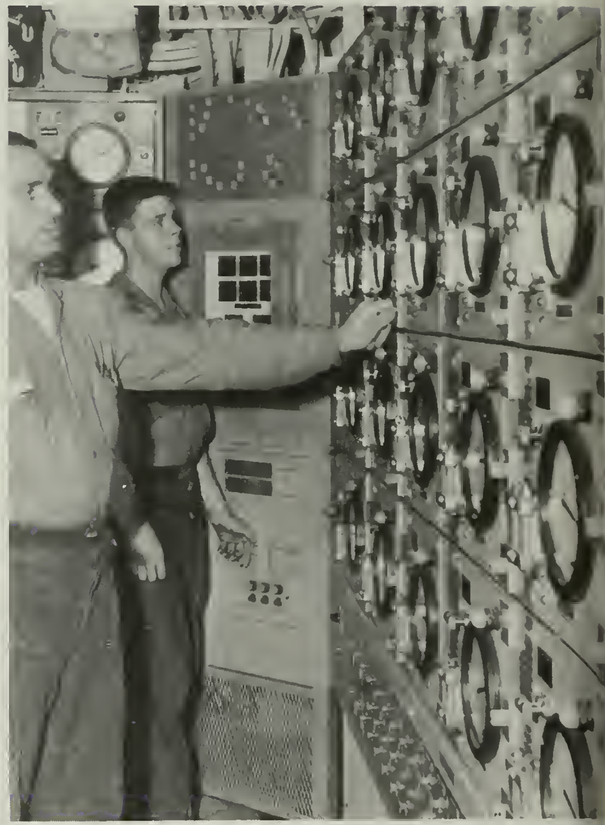
It was achieved not without sacrifice, but it was achieved in a way that won the plaudits of a grateful nation.

To the members of the Armed Forces who had participated in the action President Ford said, "I wish to express my deep appreciation and that of the entire nation to the units and the men who participated in these operations for their valor and for their sacrifice."

USS Camden On Deployment In The Indian Ocean

HELP FOR MAURITIUS

"Instead Of R & R It Was RELIEF And REHABILITAION"



Technical aid and muscle, promptly provided by the Navy in disaster relief operations for the battered nation of Mauritius, struck by cyclone winds raging in from the Indian Ocean "really brought to light a whole different understanding of the United States." The reaction to the U. S. and to the Americans themselves was extremely favorable, says the commanding officer of the first ship to arrive on the scene.

As Captain Donald L. Felt spoke, the fast combat support ship, USS *Camden*, was plowing through rain and choppy seas. Her heading was north from Long Beach to Bremerton, Wash., after a six-month cruise which was highlighted by two Indian Ocean deployments.

It was in the Indian Ocean, earlier this year, that *Camden* sailors had looked forward to three days' liberty in Port Louis, Mauritius. It would be their last R&R stop before turning homeward.

But the island nation, which lies in the southern hemisphere about 1200 miles off the coast of east Africa, was raked by winds up to 174 miles per hour that day and the day after in one of the worst cyclones of recent experience.

In its wake, the storm left at least seven people dead, 1000 homes and buildings damaged or destroyed, and at least a third of the nation's sugar crop in ruins. All electrical power was lost, internal communications were disrupted, and public water services were contaminated.

Damage was estimated at $200 million.

"By the time we arrived," says CAPT Felt, "it was obvious that we weren't going to get much rest and recreation. Instead, we provided what relief we could."

Although a lot of muscle was used in clearing giant banyan trees blocking the island's roads and clearing downed telephone and power poles, much of *Camden's* assistance was technical, says her skipper.

"Our electricians and internal communications experts went ashore and teamed up with Mauritian telephone men. They made line repairs throughout Port Louis."

Meanwhile, *Camden* electronics technicians worked with British Royal Navymen stationed ashore near Port Louis to repair the communications and navigation systems for the island's single airport.

"The airport was back in operation within 24 hours of our arrival," points out CAPT Felt.

At the same time, "our carpenters and damage control experts were sent to work on a large hospital

Facing page top: Gauges in fuel control area are carefully watched. Photo by PH3 H. Mendelson. Facing page bottom: USS Camden combines the capabilities of an oiler, ammunition ship and stores ship. Photo by JO3 D. Friesen. Below: Over 1000 homes were destroyed or damaged in the storm that swept across Mauritius. Photo by SN J. Scarborough.

ashore. Several roofs had been torn off by the storm."

While repairs continued, *Camden* sailors donated some 80 pints of blood.

"The electrical power was out and remained out for most of our four-day visit in Mauritius," says CAPT Felt. "There was no refrigeration and the city's blood bank had been completely spoiled. The blood was certainly enough to take care of any emergencies that might arise."

The fact that *Camden* was able to drop anchor in Port Louis and immediately begin helping to clean up and repair the stricken island nation will certainly "benefit our posture with the Mauritians," says the *Camden* CO.

He also notes that it is significant that by hard steaming, USS *Enterprise* and the remaining members of her task group were able to reach Port Louis three days after *Camden's* arrival there. Those ships allowed the support ship to keep her homeward-bound schedule.

CAPT Felt views Mauritius relief efforts by U. S. Navy units with a mixture of satisfaction and the feeling that they were a small, virtually unnoticed drop in a very large ocean.

As he puts it, "In Mauritius particularly, the disaster relief that was done . . . really brought to light to the population of the country a whole different understanding of the United States and of the Americans themselves which was extremely favorable.

"It may wear off," he concludes. "It may not be widely disseminated amongst the other countries. But you certainly can't deny that it has a very positive effect."

Deployment in the Indian Ocean

Seated in his sea cabin on board the empty, lightly rolling *Camden*, CAPT Felt recalls his ship's two deployments into the Indian Ocean.

"The second deployment was to accompany and support USS *Enterprise*, the nuclear cruiser *Long Beach* and two accompanying destroyers," he says.

"This was somewhat different from the first deployment in that the first one was for the express purpose of participating in Exercise Midlink '74, sponsored by the Central Treaty Organization (CENTO). We went to Midlink, participated in the exercise and we came back out of the Indian Ocean into the Pacific."

That CENTO exercise, in November 1974, involved a U. S. carrier task group joining forces with the United Kingdom, Iranian and Pakistani Navy ships in the Arabian Sea arm of the Indian Ocean.

The captain looks back at the exercise as being "very unusual" from *Camden's* point of view.

"Because of our maneuverability," he recalls with a smile, "we were able to act as an opposing warship as part of a surface unit in which we also had British and U. S. ships and an Iranian destroyer."

At the same time USS *Camden* performed another role, refueling ships from each of the participating nations. "That worked out just fine," he says.

"In most cases the rigs were fairly standard. In all cases, they were compatible with our own procedures. We had one experience with a small Iranian destroyer escort that had to use what we call a 'close-in' rig. This is seldom used in the United States Navy. But it was still within our capabilities."

CAPT Felt views *Camden's* second deployment with USS *Enterprise* with equal enthusiasm.

"That," he says with emphasis, "was to be more of a wide-ranging operation throughout the entire Indian Ocean area, primarily for the purpose of exhibiting a United States presence, through the United States Navy, to the countries surrounding the Indian Ocean.

"To be able to put a task force in an area to protect our sea-lanes," says CAPT Felt, "to me reflects the primary mission of the Navy throughout the world."

Because of the Indian Ocean's vast expanse, *Camden's* commanding officer sees the Fast Combat Support

Facing page: Children flock to FN E. Lister (left), and PO1 I. Pressley, from USS Camden. Photo by JO3 R. Hollie. Below: A cement power pole, downed by tropical cyclone Gervaise, is set upright and its insulator connections wrapped. Photo by SN J. Scarborough. Bottom: Mauritian boy "hams" it up for photographer. Photo by MM2 G. Spaulding. Right: PO3 Joe Lumpkin works with local citizen in returning the island to normality. Photo by MM2 G. Spaulding.

Ship as "probably the best suited of our logistics ships for supporting an aircraft carrier and its task group in extended operations."

The Navy currently has three AOEs in addition to *Camden*. They are USS *Sacramento, Detroit* and *Seattle*.

As CAPT Felt puts it:

"First of all, the Fast Combat Support Ship has the speed and endurance that allow it to keep up with the rather fast-moving carrier task group.

"We also carry the fuel equivalent of the largest of our fleet oilers. We carry the ammunition equivalent, if it would be necessary, of our standard ammunition ship. And, we have the capability of carrying a great number of stores, fresh and frozen products, in order to sustain the task group in these remote areas."

As he continues ticking off the advantages of the AOE, CAPT Felt speaks of the two CH-46 helicopters which were assigned to *Camden* from Helicopter Combat Support Squadron Three at NAS North Island. He says they provide *Camden* with "a great deal of versatility and we used them to great advantage.

"That," he concludes, "was our job."

—JOC Warren Grass, USN

Return From DIEGO GARCIA

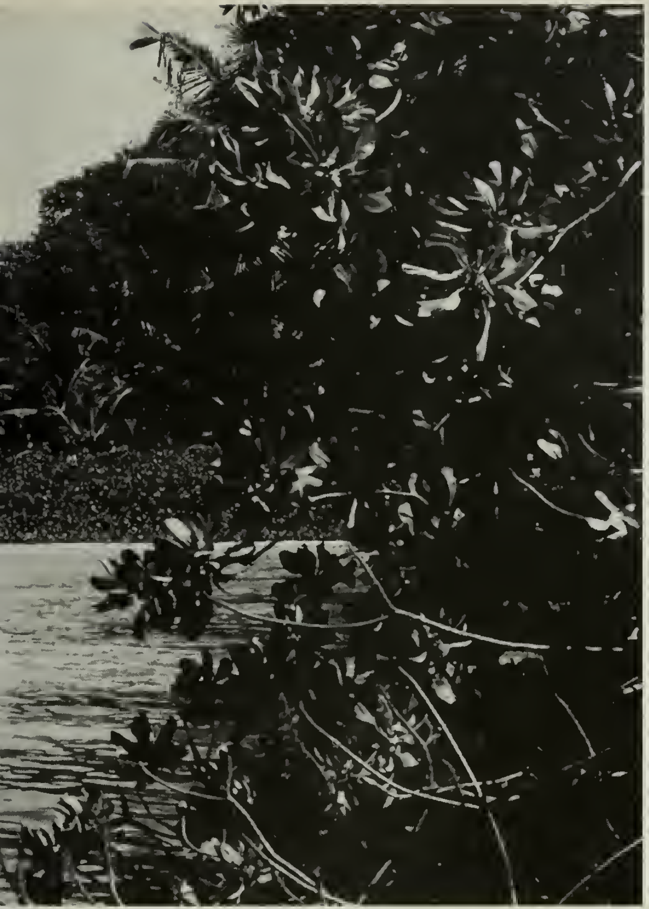
"I'm coming home," croons Johnny Mathis on the early morning radio. The 0600 siren, exuberant crowing of the roosters and the whooshsh . . . and ahh . . . of waves arouse the Diego Garcia inhabitant from a comfortable slumber. After groping for sandals and razor, a refreshing walk in the clean, cool morning air and a cold shower awaken you.

These are some of the memories of the men of Naval Mobile Construction Battalion (NMCB) 10, who recently completed an eight-month deployment to the tiny Indian Ocean coral atoll.

Horseshoe-shaped Diego Garcia is 37 miles around from tip to tip. The land ranges in width from one and one-half miles to a mere slip of sand and coral between the ocean and lagoon. Dense vegetation and wispy coconut trees abound in its tropical climate where temperatures range from the mid-90s to a low of 70. It rains frequently, yet there is plenty of sunshine.

Discovered by Portuguese explorers in 1498, the island has now attracted much public attention because of its strategic position. In 1966 the United Kingdom and the United States agreed to use it as a military facility. In 1971 the first construction battalion arrived and began building the communication station and camp.

In spite of this new importance, Diego Garcia remains just a name in the minds of most Americans, but to



the U. S. Navymen stationed there it has taken on a specific and real meaning. Since their deployment there, the men of NMCB 10 have been given the opportunity to become experts on the trials and triumphs at one of the Navy's newest duty stations.

With NMCB 10's arrival, construction continued at a healthy rate on a variety of projects, including a gym, bowling alley, medical facility, chapel and library, water demineralization building, and tanks and pipelines at the petroleum, oil and lubricants site. These projects were complemented by road construction and landscaping. Living quarters at Camp C. S. Cummins were also built—tin-roofed, wooden huts, naturally cooled by ocean breezes.

Work took up most of the day on Diego Garcia, but recreation was also important. USO shows offered professional entertainment every three to four weeks. Several movies were shown nightly, and the library was well stocked. Basketball, softball, tennis, handball and even miniature golf were popular pastimes.

One sport even evolved into a game of its own—tackle volleyball. The jungle trails were used daily by a tribe of joggers. Water sports on this tropical island were also big, and "shelling" infected almost everyone.

The biggest lift to the collective spirit was provided by the biweekly supply plane which brought mail from home. That was followed closely by the mid-deployment R&R trip to Bangkok of which about half of the NMCB 10 men took advantage.

In addition to the work and recreation, most of the men took advantage of their isolation to improve their vocational skills, study college credit courses and read. Others worked on hobbies or physical fitness. All saved money—due largely to the absence of opportunity to spend.

It would be unrealistic to suggest that the men usually whistled while they worked or volunteered to extend their separation from families and home. But even the most staunch detractor of the visit to the distant waters of the Indian Ocean is compelled to admit that there were numerous benefits to be gained from the experience.

In years to come those who made the deployment will reminisce about sitting in the rain to see an outdoor movie; the pleasure of life in a climate where clothing is reducible to the barest minimum; the sight of a brave flock of chickens invading the camp; savory taste of a meal cooked over an outdoor fire; a whiff of fresh, unpolluted air; the eager anticipation of mail; and, of course, the ever-present frustration caused by the absence of the fairer sex. These are the ingredients of existence on Diego Garcia.

As the men of NMCB 10 boarded the plane for their long flight home, one thought filled their minds—"I'm coming home. Send someone to meet me, I'm coming home," the last words of the tune by Johnny Mathis.

—LT G. A. Blair

OTSR Provides a 'Ship Weather Routing'
Favorable Winds &

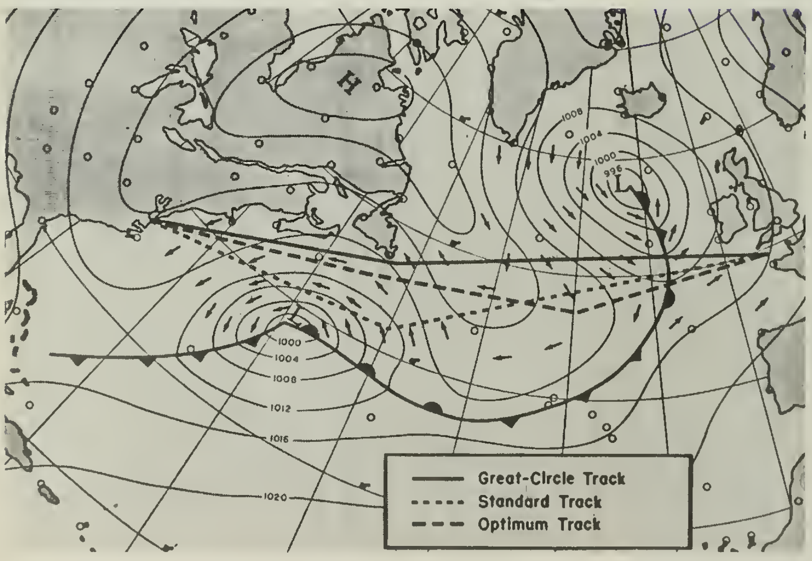
There are organizations within the Navy attempting to provide optimum sailing conditions for ocean voyages of fleet and government ships. These organizations of the U.S. Naval Weather Service Command are the Optimum Track Ship Routing (OTSR) offices at Fleet Weather Central Norfolk and Fleet Numerical Weather Central Monterey.

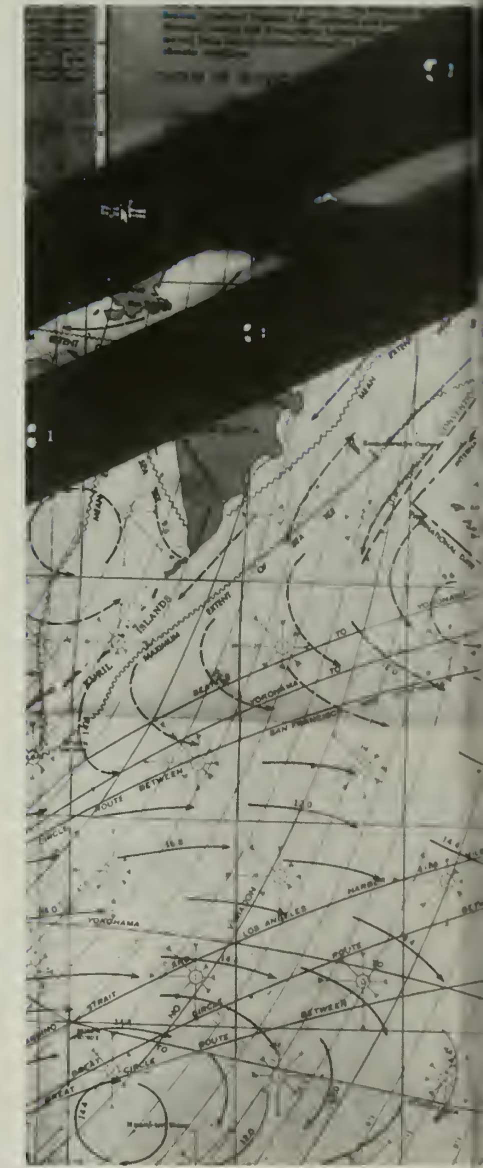
Norfolk provides routing in the Atlantic, while Monterey serves the Pacific and Indian oceans.

OTSR or ship routing is an attempt to provide a best weather—least cost route between the ship's departure port and destination. It is an advisory service which provides recommended routes upon request and makes recommendations for underway changes in route when wind and sea conditions make it necessary.

Although the Navy-sponsored routing service was begun in 1957, the concept of ships taking advantage of favorable wind, sea and ocean current has been around a long time. Most European explorers relied on easterly trade winds for crossing from Europe to the West Indies and prevailing westerlies when returning to Europe from Central and North America. In the Pacific, a similar situation occurred with Spanish galleons sailing in the northeast trades from Central America to the Philippines. These ships usually returned at a higher latitude in westerly winds to Central America and occasionally California.

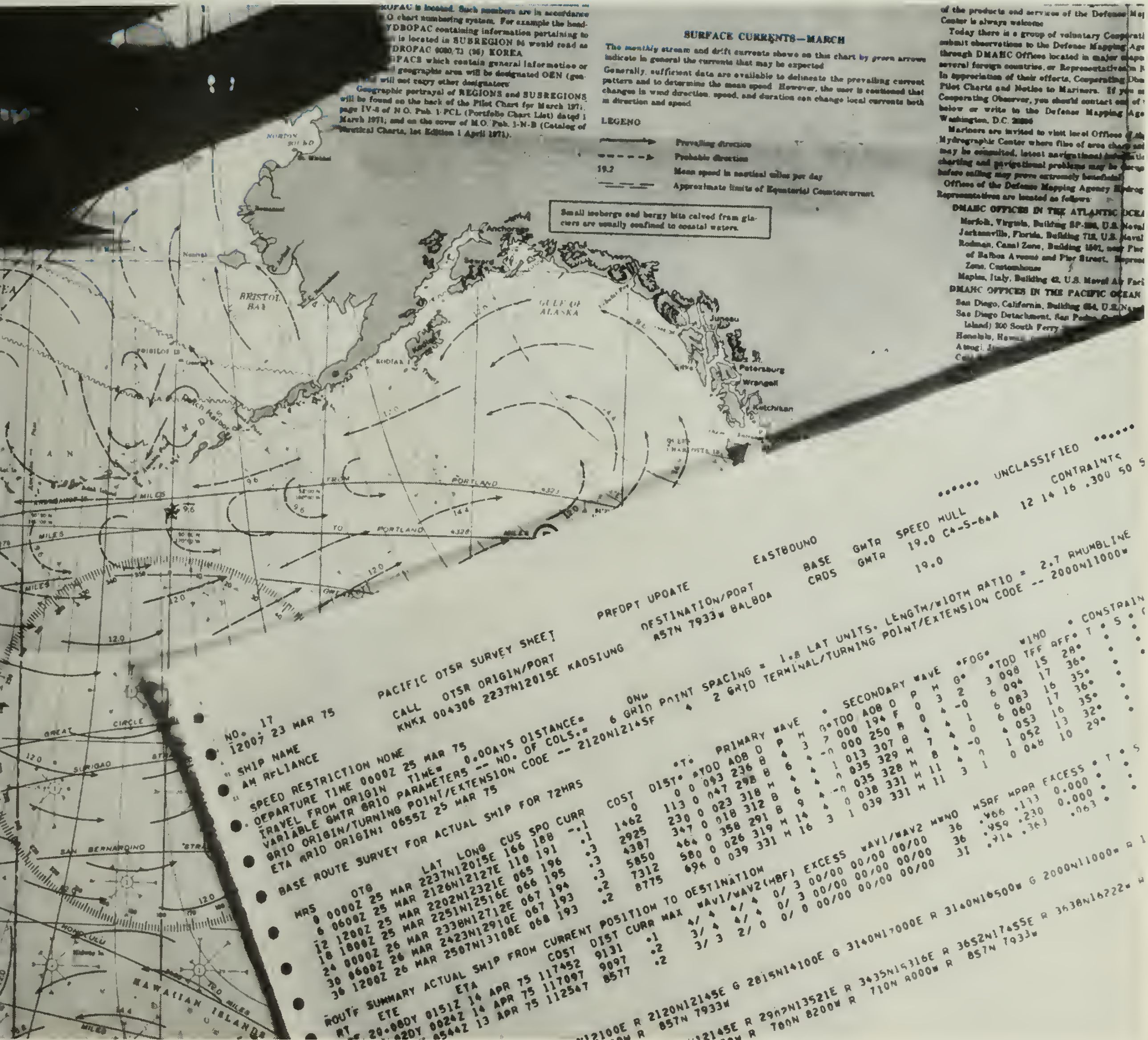
Benjamin Franklin, as postmaster-general of the Colonies in the 1770s, produced a chart of the Gulf Stream from information provided by New England whaling masters. This first mapping of the Gulf Stream helped Franklin improve the mail packet service between the Colonies and England. This was done by sailing east to England in the Gulf Stream and returning to the Colonies usually south of it. Thus the sailing time





Left: Computer surveys aid ship routing meteorologists in selecting the most efficient track for ships. Above: A computer printout of weather elements (wind, seas, fog, and ocean current) provides an instant reference for ship routing.

Service
Following Seas



for the voyage was reduced by as much as 14 days over routes previously sailed.

In the mid-19th century, Navy Lieutenant Matthew Fontaine Maury, called the Pathfinder of the Seas, compiled vast amounts of atmospheric and oceanographic data from ships log books into a series of publications called the Sailing Directions. For the first time ever, a climatology of ocean weather and currents of the world was available to the shipmaster. Information in the Sailing Directions was used to provide recommended routes for sailing ships and steam-powered vessels in the latter part of that century. On one trade route alone, the average transit time from New York around the Horn to California was reduced from 183 days to 139 days with the aid of Maury's charts.

Present day ship weather routing uses modern weather forecasting techniques and procedures to improve on the climatologically based routes from the Sailing Directions. These procedures include application of computer methods to evaluate the effect that forecast environmental factors will have on ships. First, the computer aids the ship routing meteorologist in

selecting the most favorable route for a planned deployment. In almost all cases, the route recommended to the ship is not the shortest distance between departure point and destination.

Second, once the route is issued, the computer uses the latest forecast to survey the ship's track twice daily to see if there is any change in the forecast which might necessitate a change in that track. By this procedure, the ship routing meteorologist attempts to maximize ship speed by avoiding or at least limiting the effect of adverse environmental factors.

If there is a significant change in weather along the ship's track, the ship router, aided by a computer-determined optimum track, will send a recommendation for track change to the ship. Usually a diversion is sent to avoid the winds and seas associated with a major weather system. Occasionally, a track change would also be recommended to take advantage of more favorable weather conditions on a shorter track.

Third, the computer provides a DR navigation plot of six hourly ship positions out to 72 hours along the ship's current track for all ships under OTSR. Included with the ship's navigation is a listing of expected speed for the next 72 hours, time and distance remaining, and the ETA (estimated time of arrival) at destination.

Benefits from the ship routing program at FLEWEACEN Norfolk and FLENUMWEACEN Monterey are basically safety and cost reduction. An effective ship routing service means minimizing the possibility of storm damage to ship and cargo, and avoiding injury to passengers and crew. Primary savings in operating costs include reduced damage, emergency shipyard repairs and fuel consumption. Savings are further increased by being able to set more accurate scheduling of cargo opera-

tions, RDVU/UNREP, underway training, normal shipyard maintenance periods and personnel planning.

While the objective for OTSR is to provide best weather—least cost routes, avoiding all unfavorable weather is difficult. The weather advisory (WEAX) is one of the support services available to ships and is a major function of the four FLEWEACENS of the Naval Weather Service, Norfolk, Rota, Guam and Pearl. WEAX is a twice-daily weather message which includes a short discussion of the synoptic weather pattern in the ships areas, a 24-hour forecast of weather, visibility, wind and seas along the ship's track, and a 48-hour outlook. WEAX advisory complements OTSR in that it provides a short range forecast of en route weather conditions that will aid the CO in the day-to-day planning of underway operations, exercises and drills.

OTSR is available to all sizes of ships in the fleet. From CVANs, DLGs or ATFs, the service is tailored to meet each ship's capabilities and limitations. Consideration is given to each ship's speed, loading and operational commitments in providing the extended range forecasting service of initial route recommendations and underway diversions.

—William M. Clune

A Tiny Fleet on the Frontiers of INNER SPACE

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Since the beginning of time man has constantly endeavored to seek out and understand the unexplored regions of his environment.

The land masses of the earth present challenges to the curious and adventuresome mind. Man has always turned his eyes toward these new frontiers in hopes of better understanding the world and his own existence.

Advancements in technology have now enabled man to probe the vast frontiers of outer space. These same advancements have opened up another frontier—the frontier of inner space.

The world's oceans provide man with essential elements for life and they have provided the pathways by which man could travel to the new worlds. Now, the oceans also provide man with an exciting and unique challenge—the exploration of the ocean depths.

With the purchase of *Trieste* in 1957 from the Swiss inventor and physicist, Auguste Piccard, the Navy began to explore the area of deep submersibles. Since then a command has been formed to take charge of and coordinate all the deep submergence activities within the naval establishment.

Left: DSRV being loaded aboard a C-141 aircraft. Top: DSRV aboard the "mother-submarine" USS Hawkbill. Above: DSRV-1.

Commander Submarine Development Group One, located in San Diego, Calif., was assigned the mission to possess and maintain a deep-ocean search, location, recovery, and rescue capability. Currently, Submarine Development Group One is made up of four general areas: submersible vehicles, support ships, diving and medical research.

Submersibles/Support Ships

There are six submersible vehicles now attached to Submarine Development Group One—*Trieste* II (DSV 1), *Turtle* (DSV 3), *Sea Cliff* (DSV 4), DSRV-1 and DSRV-2, and USS *Dolphin* (AGSS 555).

Trieste, through the years, has aided in several scientific projects. Most significant was Project *Nekton*, in which the submersible conducted a series of deep dives which were climaxed by a 35,800-foot descent into the Challenger Deep. This voyage to the greatest known depth in the world's oceans has never since been duplicated by any manned vehicle.

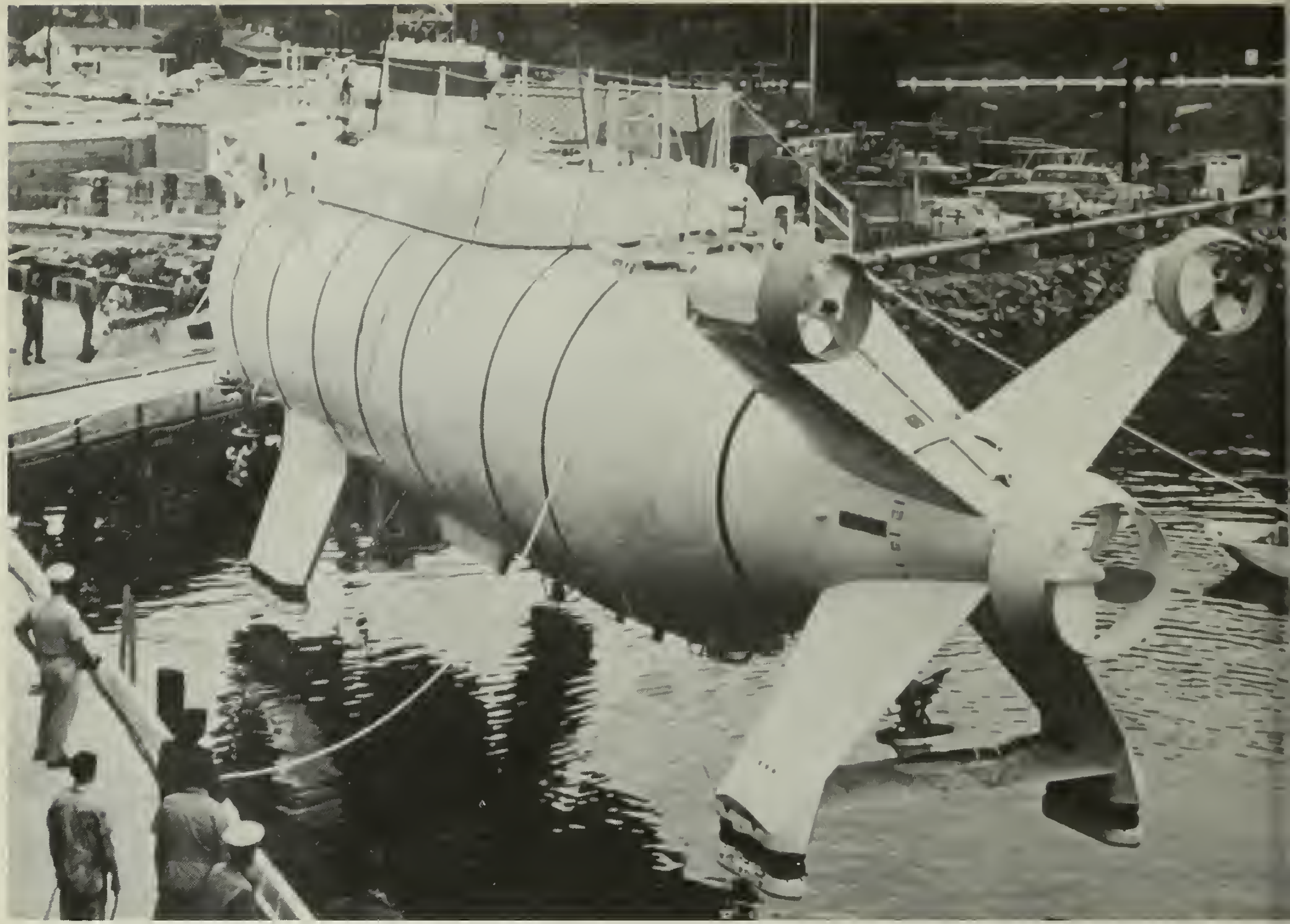
The original concept of *Trieste* has undergone several modifications. *Trieste* II is now supported by USS *Point Loma* (AGDS 2).

Sea Cliff (DSV 4) and *Turtle* (DSV 3) are small, three-man submersibles, capable of operating at depths to 6500 feet where pressure exceeds 1.5 tons per square inch. This is the equivalent of saying that each one of the plexiglass viewports must withstand the weight of a large bus distributed over its surface. Perhaps even more graphic is the fact that the 1⅓-inch thick personnel sphere must withstand 30,000 tons of pressure.

As units of Submarine Development Group One, *Turtle* and *Sea Cliff* have conducted operations for such organizations as the Pacific Missile Range, Office of Naval Research, Naval Research Laboratory and the Naval Civil Engineering Laboratory.

The Deep Submergence Rescue Vehicle (DSRV) is a bold new approach to the rescue of a crew from a disabled submarine. DSRV-1 and DSRV-2 are designed to mate with the disabled submarine and transfer up to 24 survivors per trip to either a surface support ship or a mother submarine.

Immediately after it is learned that a submarine is disabled, DSRV and support equipment are loaded



aboard three C-141 aircraft and flown to the port nearest the disaster scene. The DSRV is then loaded aboard a "mother" submarine or a surface submarine rescue ship (ASR) and transported to the scene of the disaster.

When carried aboard a mother submarine, the DSRV rides "piggy back" on the after hatch to permit entrance into the vehicle while submerged. Once in the area of the distressed submarine, the DSRV is manned and launched. Once the DSRV locates the disabled submarine it is then mated to either the forward or after escape trunk hatch to transfer life support supplies to the submarine and take on the first load of rescuees. The DSRV then commences shuttling between the two submarines until all personnel have been rescued. All of this takes place while submerged, thus providing a system that is capable of being employed in all weather, during day or night or under ice.

At present, both DSRVs are "in service, special" while undergoing extensive technical and operational evaluations to determine their operating and handling characteristics. Upon completion of evaluation the DSRVs will be fully prepared to perform their rescue missions.

USS *Pigeon* (ASR 21) and USS *Ortolan* (ASR 22) are equipped with McCann Rescue Chambers and MK II deep-diving systems for saturation diving. *Pigeon* is attached to ComSubDevGruOne and *Ortolan* to COMSUBRON Six to support East Coast DSRV operations.

There is a second submarine rescue ship attached to Submarine Development Group One, USS *Florikan* (ASR 9). Her primary mission is the rescue of personnel from a stricken submarine by means of a rescue chamber. She has a secondary mission of the salvage of the submarine itself.

This ASR is equipped with a submarine rescue chamber, helium/oxygen diving equipment, standard air deep-sea diving equipment, scuba, and lightweight diving equipment. In addition, *Florikan* has two recompression chambers, installed for the treatment of bends, air embolism and other diver diseases.

Saturation Diving

Also attached to the Group is the Navy Deep Diving System MK 2 MOD 0 (DDS MK 2/0).

Through the use of DDS MK 2/0 and the method of saturation diving, Submarine Development Group One established the world record for open sea saturation diving to 1010 feet on 28 Jun 1972. Saturation diving techniques involve exposing the body to an elevated pressure for 12 to 24 hours. During this time the body reaches a state of equilibrium with the atmosphere to which it is exposed and absorbs all of the gas that it can absorb at that pressure.

Advantage of saturation diving over normal diving is that the diver may live and work at this elevated pressure for as long as is necessary to accomplish his task, be it three hours, three days, three weeks, or three months. Decompression time in each case is approximately 24 hours per 100 feet, regardless of how long the diver remains down.

The longer the diver can work, the more efficient the dive becomes; through the use of saturation diving techniques the diver can also reach greater depths.

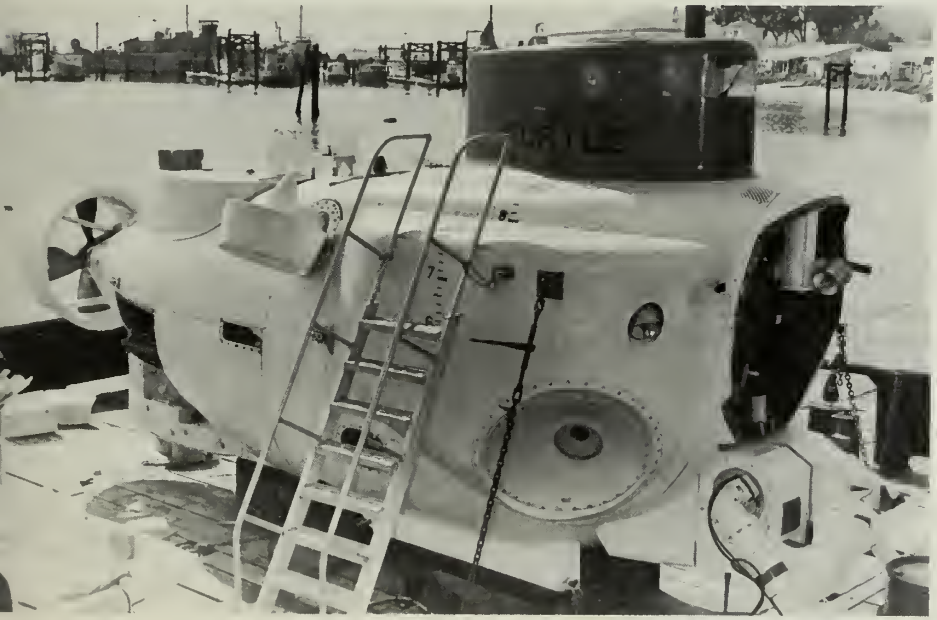
Medical Research

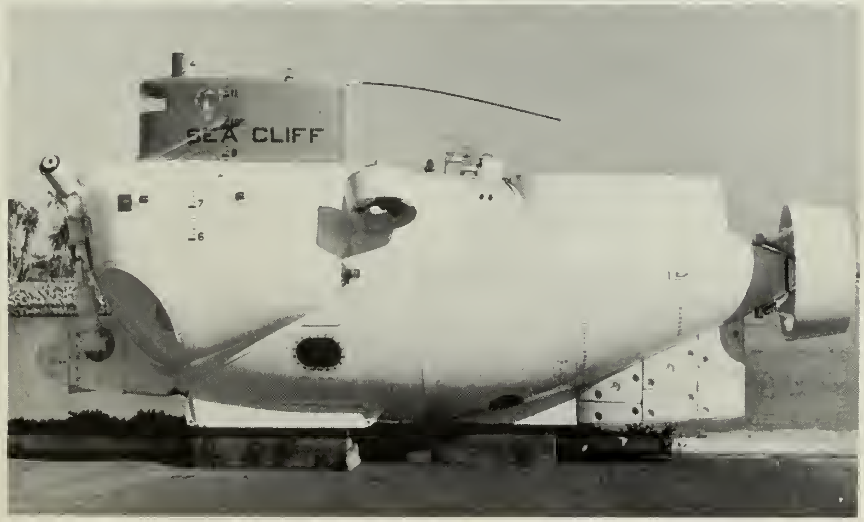
As the submersible crews and the deep-ocean divers continue to advance in their undersea capabilities, they are also providing the medical world with valuable psychological data. The effects of increased atmospheric pressure, the breathing of various gas mixtures, and the unique psychological aspects of these deep-ocean encounters provide a great deal of valuable information.

Physiological investigations consist of studies dealing with decompression, oxygen toxicity, pulmonary function, and underwater data acquisition. Behavioral investigations deal with nitrogen narcosis, stress physiology and personnel selection.

Man has begun probing the frontier of inner space. But before the ocean depths can be freely and easily explored, man must first overcome the hostile environmental effects of the oceans' elements. Submarine Development Group One, through the use of submersibles, new diving techniques and medical research is endeavoring to learn more about the oceans which cover such a large portion of our planet.

In the words of Sir Isaac Newton, "If instead of sending the observations of seamen to able mathematicians on land, the land should send able mathematicians to sea, it would signify much more to the improvement of navigation, and to the safety of men's lives in that element."





Facing page: Trieste II (DSV 1). Above: Turtle (DSV 3) aboard support ship Maxine D. Right: Sea Cliff (DSV 4).

IT'S HERE........

A Basic Uniform For All

SEAMAN to ADMIRAL

It was four years ago this spring that the Navy announced plans for a new uniform, a basic uniform that would be the same for all members of the naval service—from seaman to admiral. The uniform change symbolized an important theme, traditional in the Navy, which has received greater emphasis in recent years: "One Navy, united in purpose, striving for common goals."

That same theme had been given voice almost two centuries ago, when the members of the crew aboard the continental frigate *Providence* made a request to their captain, in 1778, that a "proper Navy uniform be procured" so that "all may have an opportunity to appear alike as brothers united in one cause." They did get a unified uniform some time later, but early uniforms for other enlisted members continued to differ from that of the officers.

This month, as of 1 Jul 1975, the evolutionary change to a one-uniform Navy which was approved in June 1971, goes into effect on a Navywide basis.

The jumper style uniforms will no longer be worn except for those personnel whose enlistment expires prior to 1 Jul 1976 and for members of the Ceremonial Guard (headquartered in Washington) who will continue to wear the old uniform as historical attire. Gone also are Service Dress Khaki for officers and CPOs, plus Service Dress White and Full Dress White for CPOs and all enlisted women.

These changes were announced in conjunction with the introduction of the new enlisted uniform. Even though they resulted in a reduction of uniforms, there has been continued concern with the existing proliferation of uniforms. Aware of the many colors of uniforms, with varied shadings of each, the Navy zeroed in on the two major problems: for the individual officer and sailor, the requirement to maintain such a wide variety of items meant that it was increasingly difficult to keep all in a proper state of good repair and appearance. For the Navy as a whole, the variety of uniforms had encouraged the appearance at any given location of different uniforms in a variation of shades and colors defying any attempt for "uniformity."

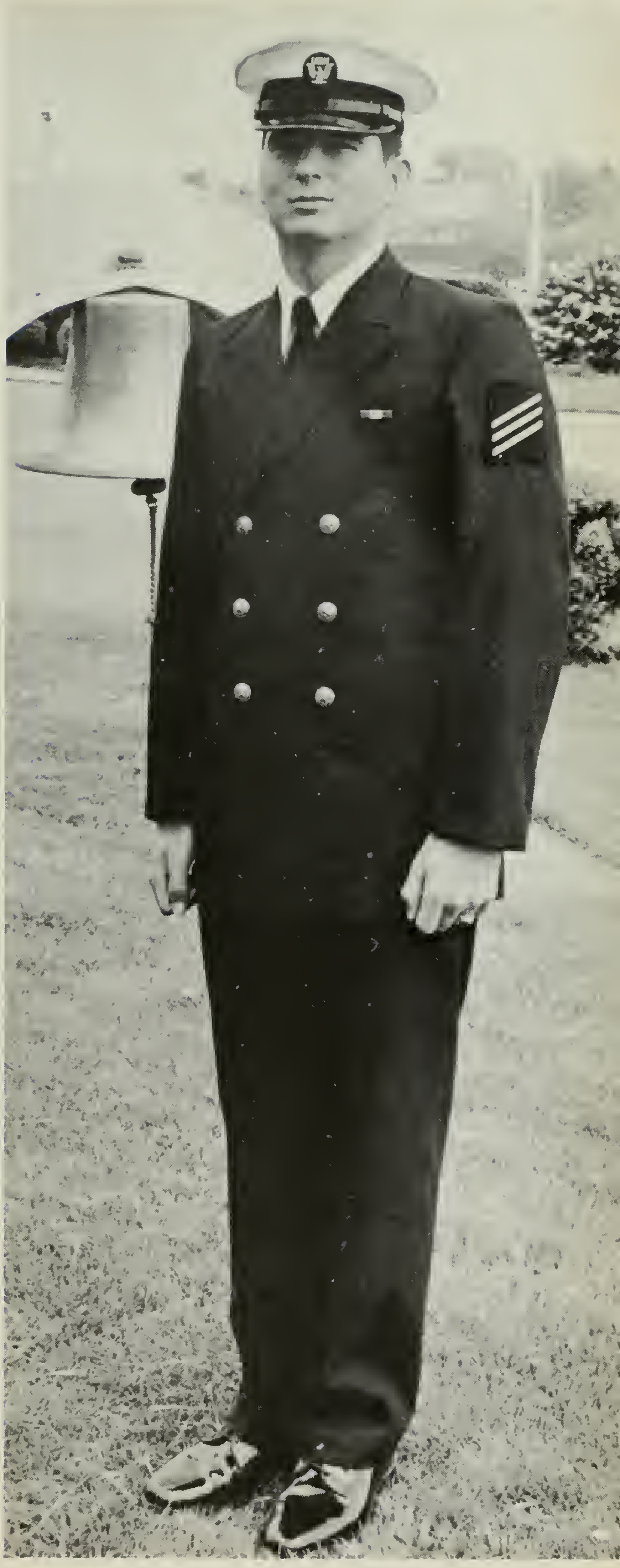
Thus, last fall, a well thought-out, long range program was begun to reduce the number of uniforms and accoutrements.

The Navy Uniform Board, under the direction of the Chief of Naval Personnel, began the review which included examining decisions made in the past and considering what should be done to provide adequate, functional uniforms for all hands.

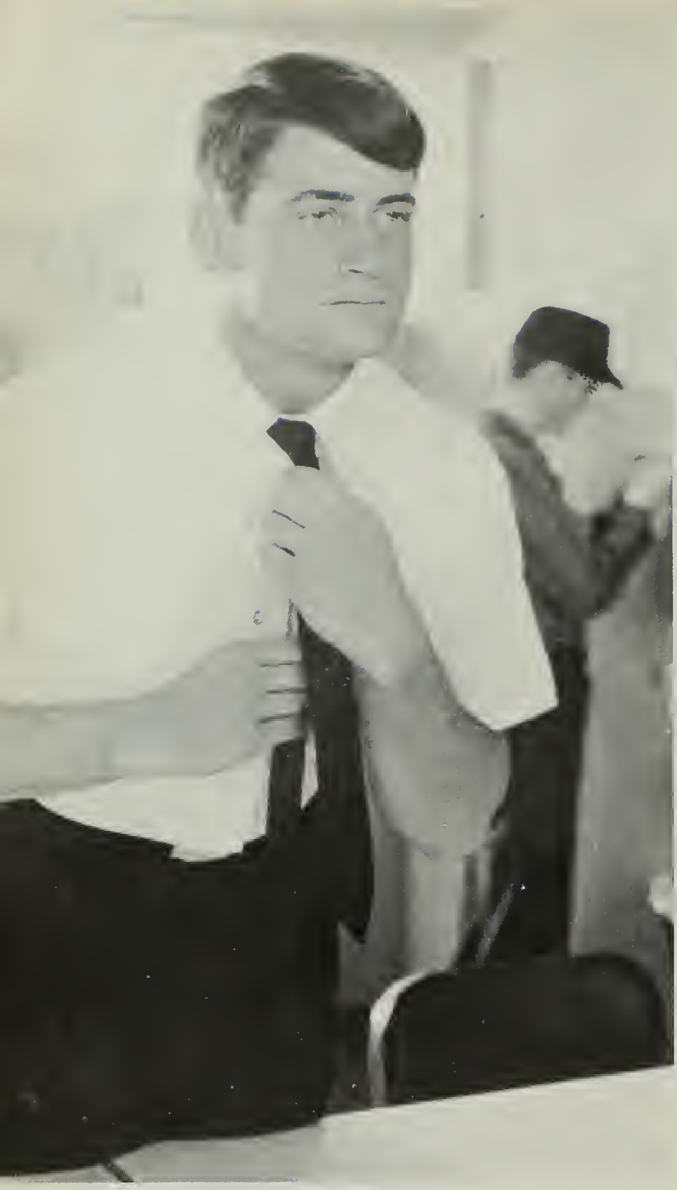
Recommendations from the fleet were given full consideration and of course some of these recommendations urged reverting to the old enlisted uniform. That proposition was again thoroughly evaluated along with others, and it was determined that such a decision would have meant higher costs and two and one-half more years of uniform instability and transition.

The decision to change the Navy enlisted men's uniform to the distinctive and traditional double breasted coat and tie style uniform was made with the consideration that it is, in fact, timely and made with the best interest of the Navy and individual service member in mind. Although it was proposed to provide an issue of the new uniform to each active member, the level of defense funding precluded such action and was thus rejected by the Secretary of Defense. Therefore, those sailors who entered the Navy prior to 1 Jul 1973 (when issue of the new uniform began) and will remain on active duty after 1 Jul 1976 are requested to purchase the new uniform with funds paid to them in a monthly clothing maintenance allowance. All enlisted persons who have over six months' service receive $5.70 per month ($68.40 per annum) with which to maintain their present uniforms or buy replacement uniforms. Navymen with over three years' service receive $8.40 per month ($100.80 annually). A complete new enlisted blue uniform consisting of coat and trousers, shirt, tie and cap purchased from the Navy Supply System through local Clothing and Small Stores costs less than $50.00.

Re-affirmation of the Service Dress Blue uniform as the basic year-round uniform for officers and enlisted,



Facing page: Three officers and an enlisted Navyman, representative of the shift to one basic uniform for all, view the new uniform as modeled by the seaman on this page. Photo above bh PH1 Rich Pendergist.

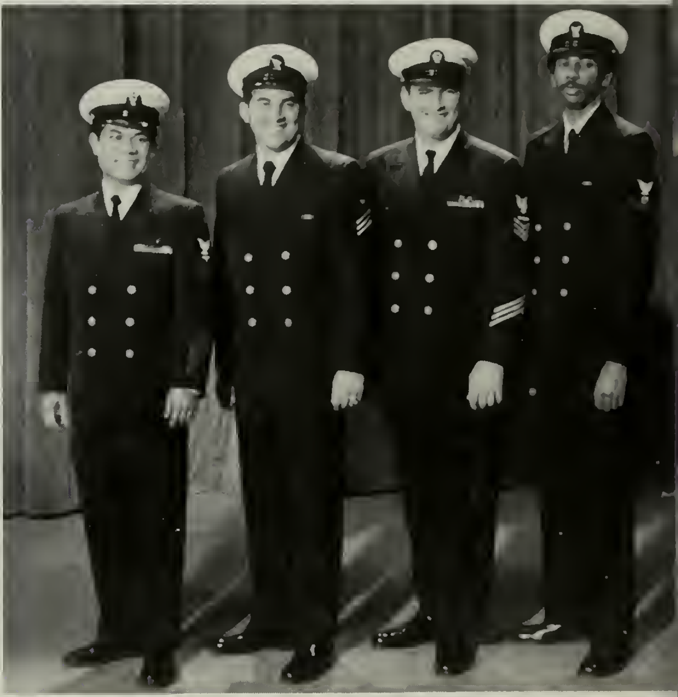


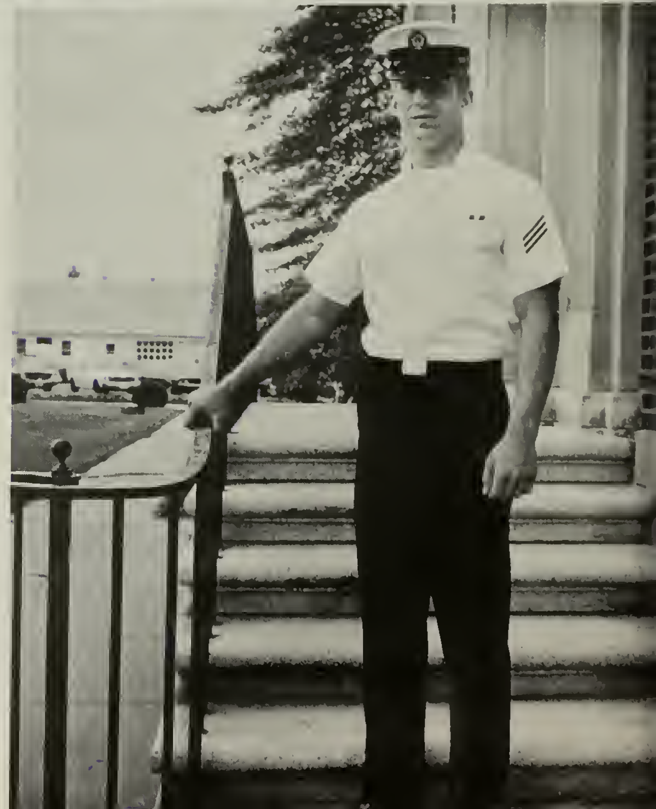
Above: Enlisted man adjusts tie on the new convertible short-sleeved shirt which will become available after present stock of white shirts is depleted. The rating badge shows up on the right sleeve because it is seen through a mirror. Above right: This familiar photo was taken when the new uniform was first announced four years ago. Left: The new summer blue uniform for enlisted personnel.

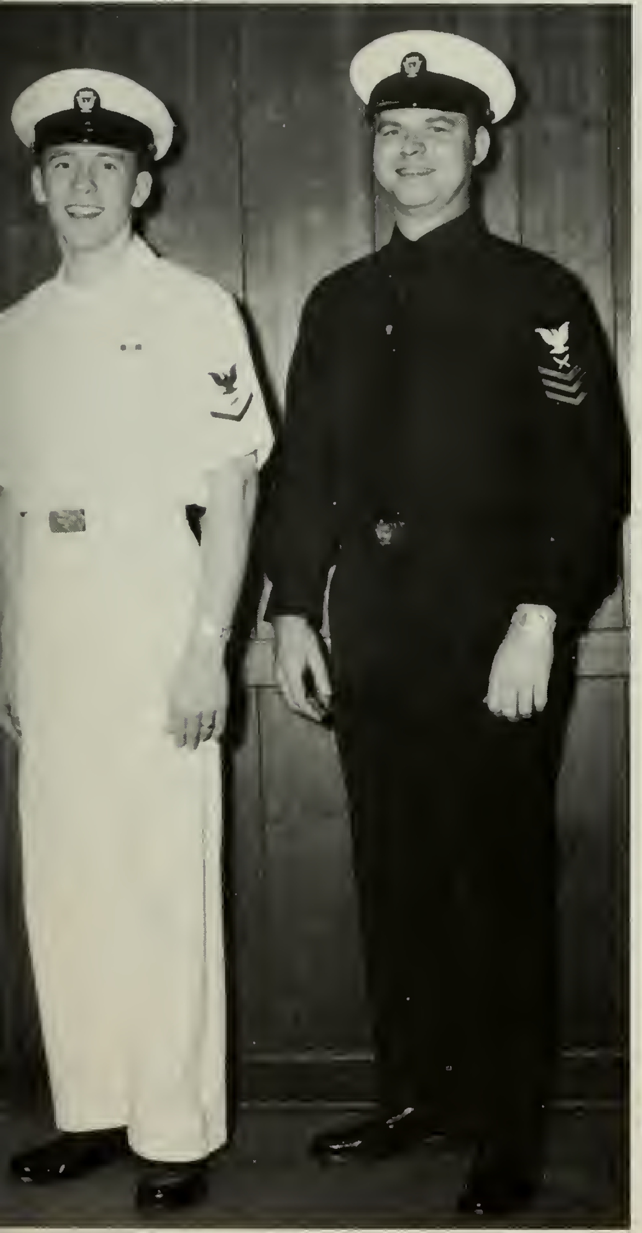
was made after careful consideration of all options. It was decided that in addition to reducing the numbers of existing uniforms and accoutrements that guidance should be given as to how and where remaining uniform combinations should be worn in order to reinforce the desire to attain uniformity of appearance of naval personnel.

NAVOP 56 therefore becomes the first step in establishing a stable long-range uniform plan intended to provide functional, practical, sharp-looking uniforms for Navy personnel. The NAVOP announced in the May 1975 issue of ALL HANDS moves toward attaining flexible combinations stemming from the basic Service Dress Blue uniform while requiring personnel to own and maintain a minimum number of separate uniform articles. The main points of NAVOP 56 are repeated below. Briefly—

- The basic all-year-round uniform for officers and enlisted is service dress blue.
- Uniforms will be prescribed by district commandants and area commanders to achieve both uniformity in specific locations and elimination of confusion for transient personnel. The NavOp will thus have the







effect of reducing the optional wearing of uniforms and the resultant lack of uniformity of appearance.

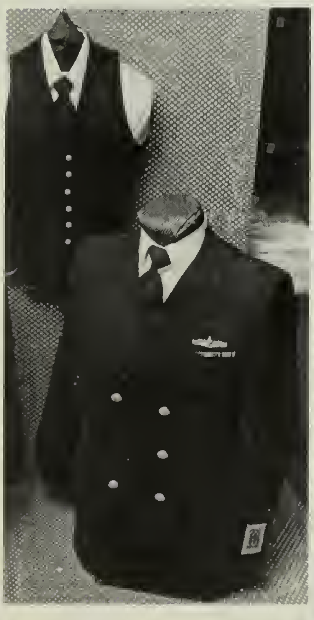
- Another important change, both from the standpoint of flexibility and cost, both to the individual and the Navy, is the introduction of the convertible collar, short-sleeved shirt in about 18 months. It can be worn with collar open or with a tie. It will become standard issue for the seabag, replacing current issue of white shirts when the stockpile of these shirts is exhausted. New recruits joining the service will then receive five of these shirts that can be worn with both winter and summer uniforms. The cost of owning a long-sleeved shirt, while still optional for wear with the service dress blues, will thus be eliminated.

The service dress blue uniform also has the advantage of both uniformity and flexibility. Worn year-round, it comes in both winter weight and summer weight fabrics. Enlisted personnel at recruit training centers are issued one of each weight.

On these pages are shown illustrative samples of the enlisted and officer uniforms and changes that are here or on the way. These are the main changes:

WINTER WORKING BLUE. It utilizes the trousers of the service dress blue uniform, along with a long-sleeved blue shirt, black belt, shoes, socks and combination cap. It is now available in several fabrics through exchange uniform shops. Issue of a wool flannel shirt

Top left: The Dress Blue Uniform, worn with pride by all, from seaman to admiral. Left: The Tropical White Long Uniform and the Winter Working Blue Uniform. The side-creased white trousers may continue to be worn by those with EAOS prior to 1 Jul 1976. Below: The vest of the Service Dress Blue Uniform with silver buttons may be worn by enlisted, and with gold buttons by officers. Below right: Models of the Winter Working Blue, the Officers' Lightweight Raincoat and the Service Dress Blue coat. The raincoat is now authorized for officers and CPOs only.



will commence for recruits during this fiscal year. It is:

Required for all enlisted men and officers by 1 Jul 1976.

Worn with tie. May be worn without tie (open collar) when prescribed for industrial safety considerations, and when aboard ship.

May be worn with blue working jacket (only aboard duty station), or with pea coat, reefer or raincoat.

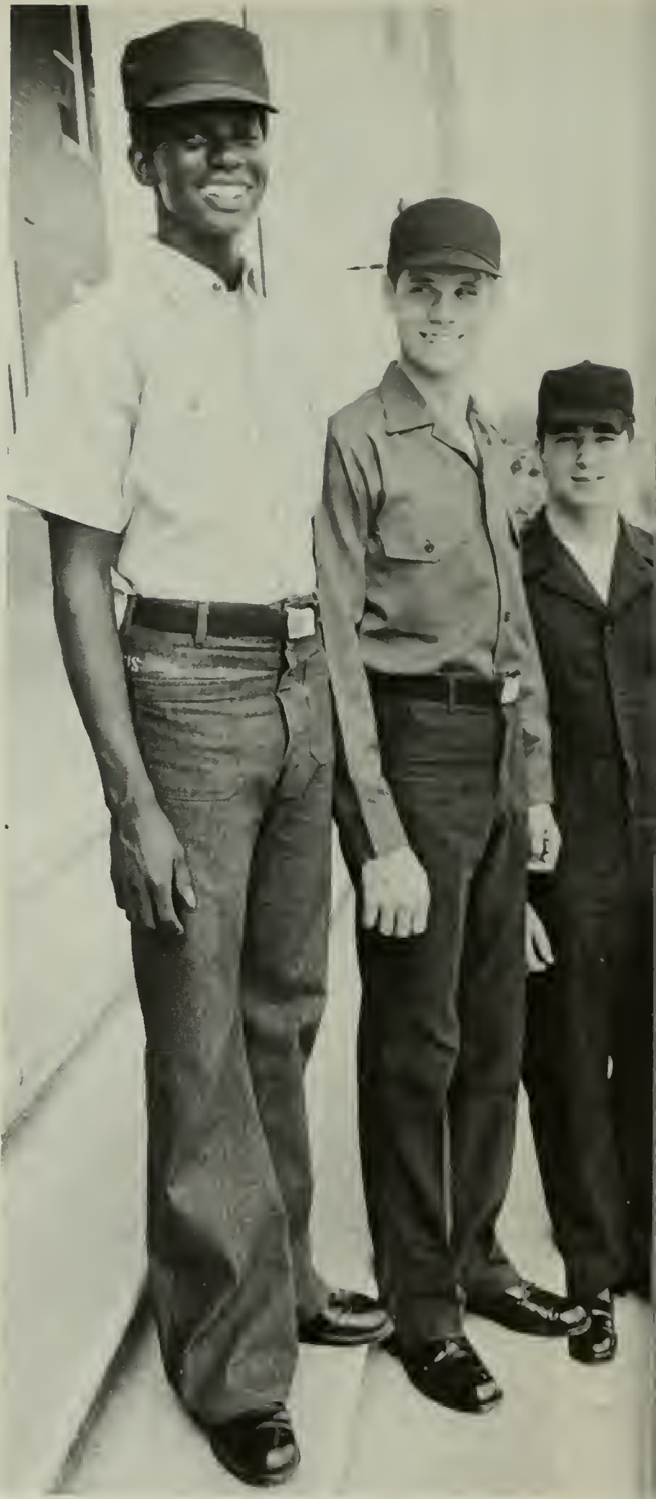
Worn with breast insignia/badges, but *not* ribbons.

Cannot be worn with service blue coat.

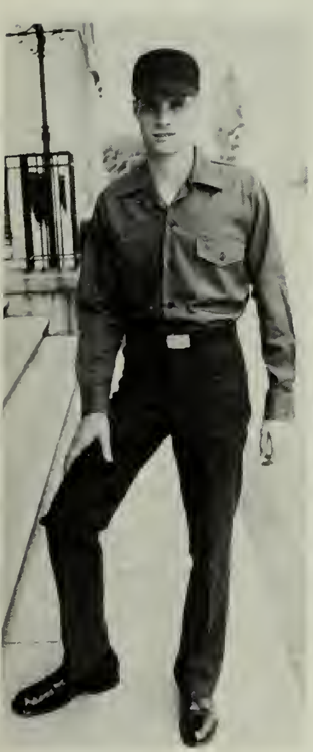
May be worn to and from work (with some restrictions) in home port or permanent duty station.

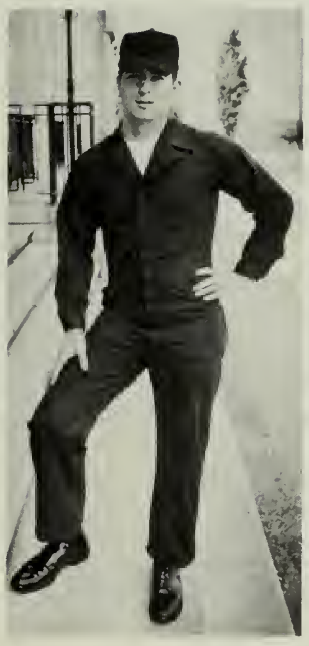
ENLISTED SUMMER UNIFORMS

- ***Tropical White Long*** will continue to be worn where specified by district commandants by enlisted personnel as a uniform of the day in areas where climate clearly dictates, or on ceremonial occasions. The new convertible collar, short-sleeved shirt (soon to be available) may be worn with this uniform.



Above: Three sailors appear in three working uniforms: Dungarees, Blue Working Uniform with modified buttoned-down-front shirt, and Lightweight Blue Coverall. Left: Three more sailors model the new dungarees, worn with the blue ball cap.





Left above: The Blue Working Uniform with modified shirt. Above: Lightweight Blue Coveralls authorized for wear in surface ships and submarines. Right: The reefer (pea coat) may be worn with either Service Dress Blue or Winter Working Blue Uniforms.

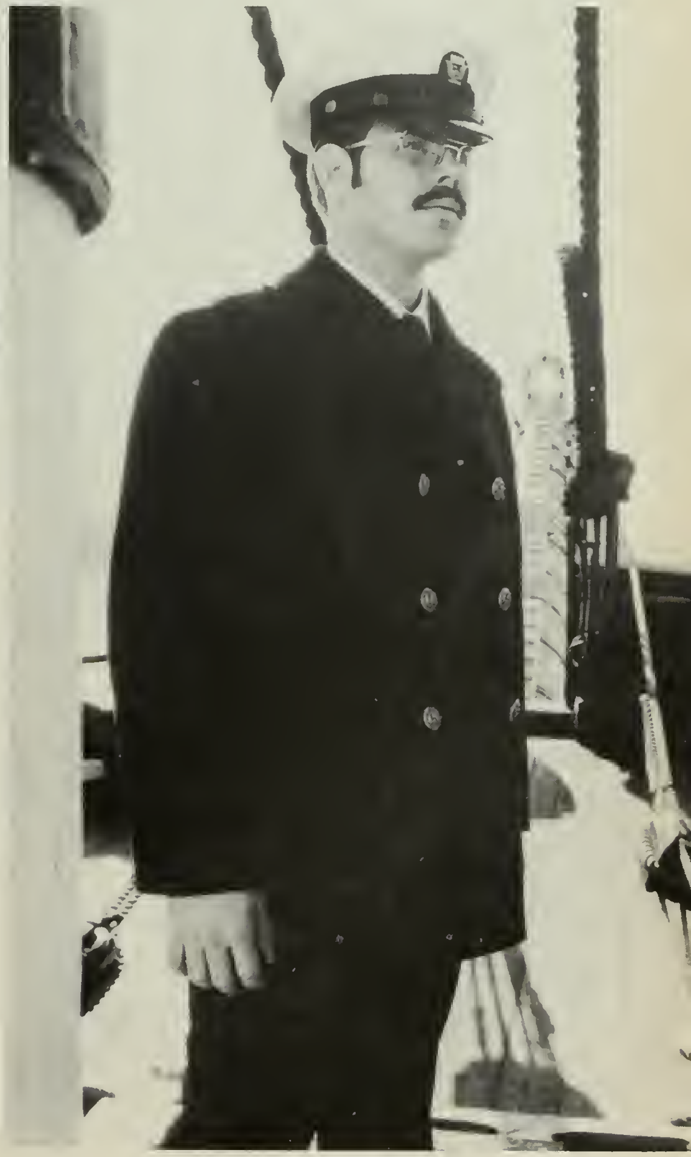
- ***Summer Blue.*** This is a new uniform approved for enlisted personnel, and may eventually replace the Tropical White Long. It consists of the tropical white shirt or convertible shirt, ribbons and breast insignia, combination cap, service dress blue trousers, black belt, shoes and socks. It will be worn with rating badges for E-1 to E-6, and collar devices for E-7 to E-9. It will be especially useful when working conditions preclude the wearing of white trousers. One of the advantages of this uniform when the convertible shirt becomes available is an easy conversion to service dress blue for more formal wear by the addition of a tie and coat.

OFFICER SUMMER UNIFORMS

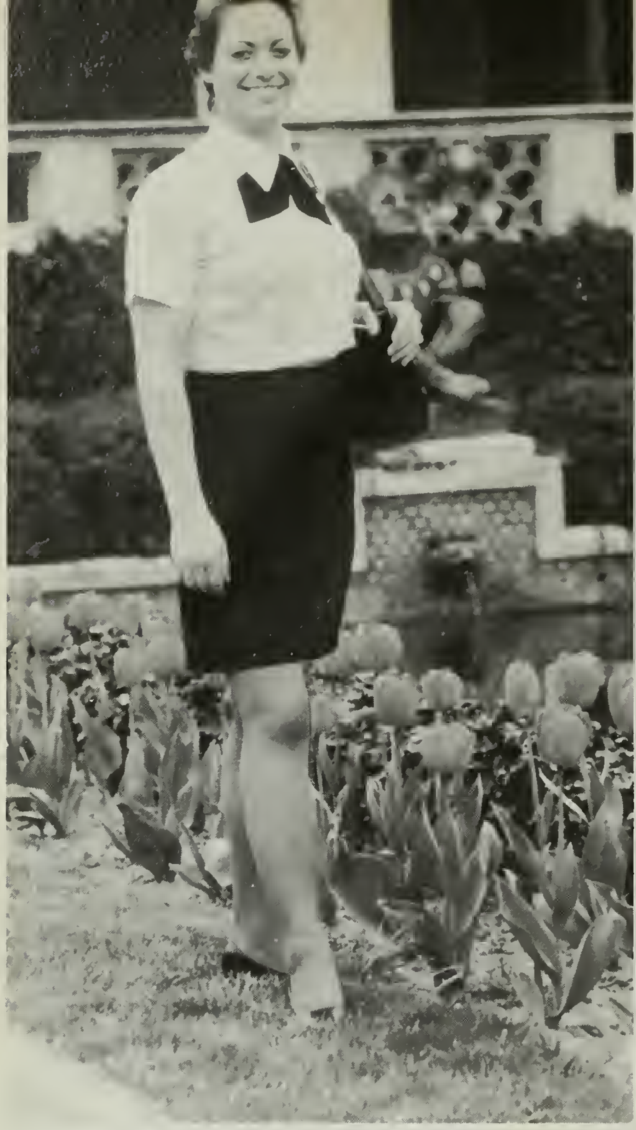
- ***Full Dress White*** will be retained as a uniform for all officers.
- ***Tropical White Long*** will also be retained. Under consideration are plans to augment this with the officer's equivalent of the Summer Blue uniform (above).

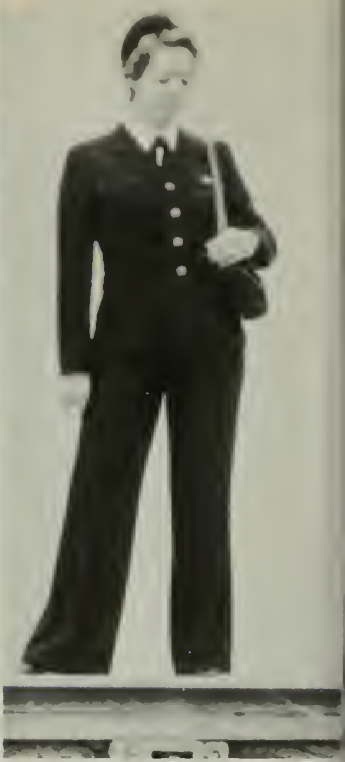
KHAKIS AND AVIATION GREENS

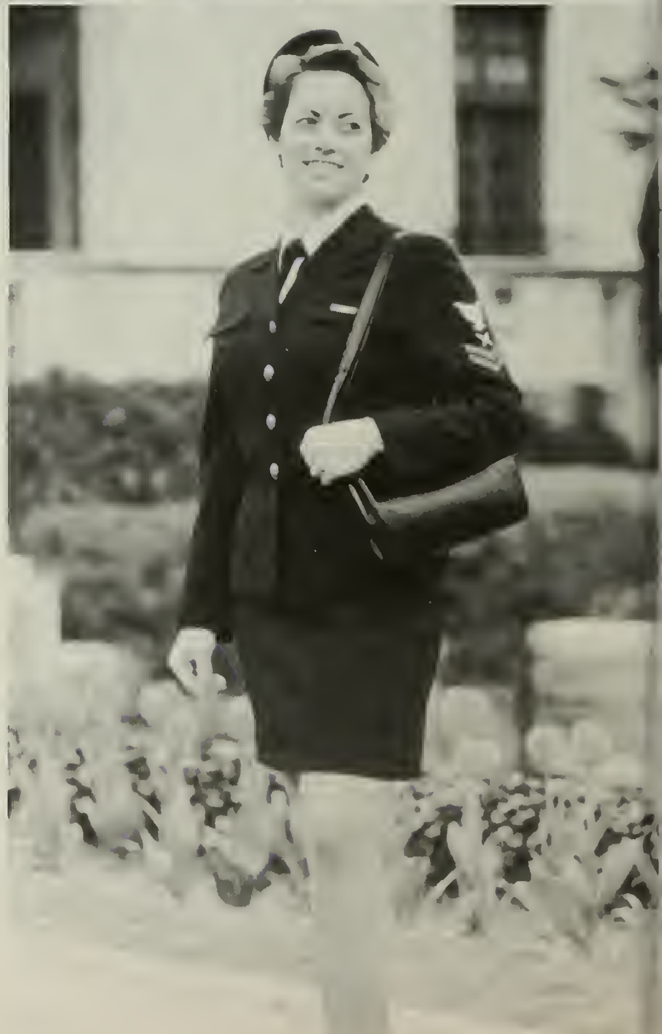
- Tropical Khaki Long has been deleted as a dress uniform. The uniform has been redesignated ***Working Khaki*** and consists of a short-sleeved khaki shirt, khaki trousers and belt, combination cap or fore and aft cap. The trousers may be of worsted, double-knit, wash-and-wear fabrics, and washable cotton that meets acceptable standards of neatness. It may be worn with the optional khaki jacket, but not the blue working jacket. It will be worn with breast insignia/badges, but *not* ribbons. It may be worn to and from work.
- The long-sleeved khaki shirt will be an authorized uniform item only when worn with the optional ***Aviation Green*** uniform after 1 Jul 1975.
- Brown shoes will be deleted as an authorized uniform item, effective 1 Jul 1976. Black shoes and socks may now be prescribed for wear with khaki uniforms and the optional Aviation Green uniform.



THE NEW UNIFORMS







Above: Summer Blue is a new uniform authorized for enlisted women. Center top: The beret for optional wear with women's uniform. Note new insignia. Center: The combination cap with the old cap insignia may still be worn by those who entered the Navy before 1 Jul 1975. Far right: Slacks may be worn with Service Dress Blue or Summer Blue Uniforms. Below right: The new Service Dress Blue Uniform with optional beret.

OTHER WORKING UNIFORMS

- ***Dungarees.*** A flare-legged dungaree trouser and chambray shirt uniform will be introduced in the near future. It is similar to those presently optional "dungarees" sold through the Navy exchanges. It is planned to replace the current blue working uniform and will be phased in as stocks of that uniform are depleted.
- ***Blue Working Uniform.*** While awaiting introduction of the new Dungaree uniform, the shirt of the present work uniform has been modified to have an open, button-down front, and will be worn inside the trousers. This modified uniform is now being issued to new recruits.
- ***Coverall.*** A new lightweight blue coverall is approved as organizational issue for surface ships. It will also replace the present *Polaris* submarine type coverall and should be available by 1 Jul 1976.

The women's Light Blue Uniform and the men's Tropical White Long Uniform.

WOMEN'S UNIFORMS

A review of the current uniforms authorized for women officers and enlisted women has been conducted. Several changes have been proposed, but a final decision has not been made on all the proposals. Here are some of the changes that have been approved.

- ***Service Dress Blue.*** Effective this month, Navywomen at recruit training centers are being issued service dress blue uniforms made of the same type fabrics and black shade as that of men. The anchor and propeller emblem on the collar of the enlisted woman recruit's uniform has been removed, and the coat has pewter buttons (like those on the enlisted man's coat) rather than the gold buttons. Enlisted women will also change to the same cap device as men. The design of women's uniforms, whether officer or enlisted, will be alike. The types of fabric authorized include polyester blends, gabardine, double knits, and tropical worsted.

While the enlisted woman's uniform, as indicated above, is mandatory for all new recruits entering the service after 1 Jul 1975, those already in service prior to that date have an optional period of two years before completing the changeover. The revised woman's uniform becomes mandatory on 1 Jul 1977, except for those whose enlistment expires prior to 1 Jul 1978.

- ***Service Dress Slacks.*** Currently optional for enlisted women and women officers is a pants suit consisting of flared slacks, worn with the service dress coat and existing white blouse with tie.
- ***Summer Blue.*** This is a new uniform authorized for enlisted women to be worn when prescribed by district commandants. It consists of the white blouse and tie worn with either service dress skirt or the flared slacks. Either the combination cap or the newly authorized optional beret may be worn with this uniform.
- ***Beret.*** An optional feature of the woman's uniform (officer and enlisted) is the beret, shown on these pages, worn with the same insignia as that on the combination cap.

Several additional changes are under consideration, including a new four-piece interchangeable ensemble as replacement for the light blue summer uniform. Results of this review will be published in ALL HANDS when approved.

MEN'S UNIFORMS

	Officer	*CPO*	*Enlisted (E-1 - E-6)*
Basic	Service Dress Blue	Service Dress Blue	Service Dress Blue
Summer & Tropical	Tropical White Long	Tropical White Long Summer Blue	Tropical White Long Summer Blue
Summer Ceremonial	Full Dress White	Tropical White Long	Tropical White Long
Work	Winter Working Blue Working Khaki Aviation Green Coverall	Winter Working Blue Working Khaki Aviation Green Coverall	Winter Working Blue Dungaree or Blue Working Uniform Coverall

from the desk of the Master Chief Petty Officer of the Navy

'Uniformly Speaking'

Because every member of our Navy is a representative of the American public, his or her dress, grooming, and conduct should always reflect credit upon both the Navy and our country. Moreover, wearing our Navy's uniform should be a matter of personal pride to all naval personnel.

Since the American public would not favorably support a Navy whose members were unkempt or lax in personal hygiene, and because the Navy's Uniform Board is primarily concerned with standards of grooming and dress, I consider my position as a voting member of the Navy Uniform Board a prime responsibility.

I think it is important that you know you are personally represented on the board. The board consists of approximately 15 members representing all segments of the naval community from seaman to admiral, both female and male. Each member of the board is charged with providing input from the members he or she represents. Under the direction of the Chief of Naval Personnel, the board meets frequently to discuss changes in uniform and grooming regulations.

Additionally, two naval officers work on a full-time basis to deal with uniform and grooming standards. Commander F. T. Leroy is the Assistant to the Chief of Naval Personnel for Uniform Matters, and Lieutenant J. C. Conway (SC) is the Recorder for the Navy Uniform Board. CDR Leroy, LT Conway and their staff work many long hours gathering input, preparing briefings, answering inquiries, and disseminating information on uniform and grooming regulations.

MCPON John D. Whittet. Photo by G. D. Hughes.

SEABEES IN BERMUDA

The Seabees of Naval Mobile Construction Battalion 71 completed the overlay of the main runway at the Naval Air Station Bermuda early this spring. Favorable weather since the 17 February start, combined with the expertise and efficiency of the personnel involved, enabled timely completion of this significant construction effort.

The event culminated many hard months of planning and preparatory work involving special training of personnel, material and equipment selection, staging and shipments, erection of asphalt plants and the paving of numerous Naval Air Station roads, taxiways and aircraft parking aprons. The logistics of this operation was a major undertaking in itself, as all materials used had to be shipped into Bermuda under critically demanding time frames.

The new runway surface, approximately two and one-eighth inches thick and extending over the entire 7622 feet of existing asphalt surface, involved placement of some 15,500 tons of asphaltic concrete. The runway paving was more challenging than most asphalt jobs because the Seabees had to work at night to avoid conflict with daytime aircraft movements. To combat the problems caused by the darkness, the Seabees designed and built special trailer-mounted lighting units to illuminate the runway. The lighting, training, planning and just plain hard work enabled the men to pave about 500 lineal feet of runway per night.

The completion of the runway overlay was the major asphalt milestone for the battalion but it still has to complete construction of shoulders along the entire runway, overlay additional taxiways and parking aprons, and repaint runway pavement markings.

When the Seabees of NMCB-71 leave Bermuda in the near future to return to Gulfport, Miss., they will look back on the Bermuda deployment with the satisfaction of knowing they've completed a demanding construction job on time and with quality workmanship.

As a result of all these efforts, the Navy Uniform Board ultimately forwards to the Chief of Naval Operations (CNO) recommendations on uniforms and grooming regulations which represent the views of all levels of the Navy. Consequently, the CNO may confidently promulgate uniform and grooming standards which reflect months of research, planning and discussion.

The decisions promulgated by our CNO or any CNO on uniform changes are not taken lightly and are made to promote Navywide overall morale and retention and to be responsive to your desires.

A decision to change the Navy's bell-bottomed, jumper-style dress uniforms to a distinctive and equally traditional officer-style, coat-and-tie dress uniform was made in 1971. The decision was made as a result of many years of experimentation, personnel surveys and retention studies, and reflected the Navy's desire to have a uniform which was more appropriate to the times and suited for the sophisticated, technically oriented sailor of today.

Surveys revealed that 81 per cent of the enlisted men preferred a coat-and-tie style uniform over the jumper and bell-bottoms. Since 92 per cent of the officers and chiefs interviewed had a good opinion of their dress blues, the logical move was to go to that style of uniform for all Navymen, from seaman to admiral.

The concept of one basic uniform is consistent with the Navy's ideal of "One Navy, United in Purpose, Striving for Common Goals." Changes announced in NavOp 56 are further directed toward building more flexible combinations from that one basic uniform, the Service Dress Blue.

Letters and telephone calls to my office have indicated that some members mourn the passing of the Tropical Khaki Long uniform. The decision to use khakis only as a work uniform was in line with the CNO's desire that we ultimately provide functional and attractive uniforms with a nautical appearance for all naval personnel.

I recognize that Tropical Khaki Long has enjoyed widespread popularity. However, at the same time it has also been considered less than attractive on some occasions due to the proliferation of colors and nonmatching combinations of hats, trousers, and shirts, as well as several shades of shoes. On the other hand, Working Khaki provides a thoroughly functional and easily cared-for uniform for both work and local commuting.

While NavOp 56 is certainly not the total answer to all uniform problems, the Navy Uniform Board will continue to review dress and grooming requirements and recommend changes to the CNO. The ultimate goal will be to reduce superfluous items and attain uniformity while providing a distinctive and practical uniform for Navymen and Navywomen.

To accomplish this goal, the Navy Uniform Board will continue to survey the fleet. Your opinion is important. Yet, surveys are only one method of gathering background information for final decisions. Opinions generally vary with the number of people being surveyed. Cost effectiveness, availability of material, and durability must also be considered when selecting uniforms for Navy members.

At this time, the Navy Uniform Board is undertaking a major review of uniforms for Navywomen and grooming standards for all personnel. When all is said and done, you may be assured that all Navy personnel will be provided with uniforms and grooming standards which reflect traditional and contemporary societal norms, as well as Navy standards.

As I indicated previously, our proud American heritage commands a neat, uniform appearance from all hands. At home or abroad, each of us can make a positive contribution to the trim and tidy appearance that the Navy and the public have a right to expect. Uniformly speaking, it's not only what you wear, but how you wear it!

ENLISTED AND OFFICER PROMOTION FREEZE LIFTED: SELECTEE BACKLOG CLEARED

In case you haven't heard yet, the advancement and promotion freeze imposed last February has been lifted. According to BuPers, funds are now available to resume normal promotions.

All officer promotion lists were scheduled to be cleared by 1 July. The majority of pending enlisted E-4 through E-9 advancements were also slated to be made by mid-July. More information on the lifting of the freeze is contained in NavOp 73 of 28 May 1975.

NAVY SELECTS TOP THREE SAILORS FOR FY 75

Winners of the FY 75 CNO Sailor of the Year Awards were recently announced. They are: Pacific Fleet, SK1 (SS) Robin E. Marsh, USS Grayback (LPSS 574); Atlantic Fleet, ADJ1 John T. Litzinger, Helicopter Antisubmarine Squadron (Light) 34; and Shore, BM1 Frank J. Czajkowski, NTC San Diego.

These petty officers are scheduled to visit Washington this month to receive Secretary of the Navy's and CNO's congratulations along with meritorious promotions. They and their wives will then enjoy five days of R&R at a location of their choice in CONUS.

AVIONICS RATINGS PICKED FOR NEOCS PILOT PROGRAM

The avionics portion of the aviation maintenance occupational field has been selected for study in a NEOCS pilot program. As a result, a complete updating of occupational standards will be made for aviation electrician's mates, aviation electronics technicians, aviation fire control technicians and aviation antisubmarine warfare technicians. During the coming year, representatives of the Deputy CNO (Air Warfare), ChNavPers and CNET will review the skill requirements within the avionics occupational field, identify appropriate skill levels and the training to support them, and explore common skill areas among the avionics ratings. BuPers reports that this effort is intended to refine all avionics technical training, classification and use of personnel, and to modify some of the detailing prodedures to accommodate the changed standards.

ALL BASIC ELECTRONIC WARFARE TRAINING PUT UNDER ONE ROOF

The Navy's basic electronic warfare (EW) training (airborne, surface, and subsurface) has been centralized in the new consolidated Navy Electronic Warfare School which opened at Pensacola. The school, located at the Naval Technical Training Center, Corry Station, is a major component of the Electronic Warfare Training System. Students will receive instruction in all phases of airborne, surface and subsurface operations and maintenance in the EW field. The school is expected to build up to an annual input of about 2400 students over the next five years, and will eventually employ approximately 175 instructors. Ninety-one students are enrolled in the school's first class.

MCPON SELECTION NARROWED TO FOUR CANDIDATES

The field of competitors seeking the Master Chief Petty Officer of the Navy post has been narrowed to four men. They are: UTCM Robert L. Evans stationed at the Bureau of Naval Personnel; NCCM Charles H. Griva of Commander Naval Surface Force, Pacific; PNCM Joe D. Pierce of Chief of Naval Air Training, Corpus Christi; and OSCM Robert J. Walker of Commander Naval Air Force, U. S. Atlantic Fleet. Final selection is expected to be made soon.

• RESERVE MCPOF NAMED TO SUCCEED AFCM JOHNSON

Master Chief Yeoman Joseph Lalley was recently chosen to be the next Master Chief Petty Officer of the Naval Reserve Force. He is scheduled to relieve current Reserve MCPOF, AFCM Richard P. Johnson, in New Orleans this August. YNCM Lalley is now serving as administrative officer and MCPOC of the Naval Air Reserve Unit, Norfolk, Va.

• NESEP NOT YET READY TO RECEIVE APPLICATIONS

Applications for the 1976 NESEP Program are not now being taken, as was reported in the May 1975 Navy News Briefs. According to BuPers Notice 1530 of 19 May 1975, "Each applicant shall complete and submit not earlier than 1 October a NESEP application, NAVCRUIT 1110/122 (2-73), via his commanding officer to reach the Chief of Naval Personnel (Pers-483) not later than 1 November." BuPers officials said that any application received before 1 October will be returned to the command for resubmission within the designated time period.

• RETIRED PAY INVERSION WORKSHEETS AVAILABLE

"Retired pay inversion" is a complex issue of growing concern to all Navy personnel contemplating retirement. The situation may again be encountered on 1 Oct 1975. In an effort to help retirement-eligible personnel reach a knowledgeable decision before October, a memorandum has recently been sent from the Chief of Naval Personnel to all commanders to explain the problem and discuss the alternatives. Involved in retirement pay inversion is the question: "Will I receive a greater amount of retired pay by retiring before 1 Oct 1975 or by continuing on active duty and retiring at a later date?" The answer to this question depends upon whether there is another Consumer Price Index (CPI) adjustment to retired pay prior to the next anticipated active duty pay raise in October 1975. It is emphasized that the complexities involved require that each member's case be considered on an individual basis because many members clearly stand to earn increased retirement benefits by continued service. Included in the memo are worksheets with which an individual can compute retired pay before and after the next active duty pay raise with no further CPI adjustment, and with an additional five per cent CPI adjustment. Worksheets will be made available by local commands to each individual considering retirement.

• TWO NAVYMEN NAMED WHITE HOUSE FELLOWS BY THE PRESIDENT

Lieutenants Dennis C. Blair and Randall W. Hardy are among the 14 men and women recently named by President Ford to be White House Fellows for FY 76. LT Blair is currently serving with the CNO Systems Analysis Division; LT Hardy as CNO Assistant NATO Plans officer. This marks the first time Navy has had two Fellows selected in the same year and brings the total to five Navymen chosen for the honor since the program began in 1964. The White House Fellow Program offers young Americans firsthand experience in the process of American Government by allowing them to work on the staffs of the President, Vice President, members of the President's Cabinet or heads of government agencies.

REFUGEE SPONSORSHIP POSSIBLE THROUGH PRESIDENT'S TASK FORCE

Navy people wishing to sponsor Indochina refugees may do so by working through the interagency Indochina Task Force, established by the President in April. The task force includes representatives from the U. S. Departments of State, Defense, Justice, HEW and Labor. It is designed to assign sponsors to refugee families and to aid them in their effort to help a refugee family become self-supporting in the shortest period of time. Sponsors assist refugee families to find jobs, locate schools for their children and acquaint them with American customs and laws.

Individuals can initiate action for assignment as sponsors by contacting the task force at its toll-free number (800) 368-1180 or, from within the Washington, D. C., area, at 632-9800, and supplying the following information: whether it is an individual or group sponsorship; the assistance offered, that is, financial aid, shelter, jobs; duration of sponsorship; name, if a specific family is to be sponsored; and the size of the family that the sponsor can accommodate. Sponsors will be personally interviewed by representatives of one of nine national volunteer organizations assisting in the program. Once accepted, the sponsor will be contacted by the volunteer organization to make further arrangements.

In addition, a USN/Indochina Navy clearing office has been created in the Pentagon to aid former members of the Cambodian or South Vietnamese Navy. It will operate through August 1975. This office can be contacted during normal working hours by phone at autovon 227-5406 and 225-3094/3096/3099, or at commercial (202) 697-5406 or 695-3094/3096/3099/.

A CHALLENGING OPPORTUNITY: BE A NAVY RECRUITER

Volunteers are urgently needed in the challenging field of Navy recruiting. Immediate positions for men and women are open in the following Navy Recruiting Districts (Some typical station locations are also shown): New York, N. Y. (Jamaica, N. Y.; Bayshore, L. I.); Newark, N. J. (Asbury Park, New Brunswick); Philadelphia, Pa. (Atlantic City, Toms River, N. J.; Chester, Pottstown, Pa.); Detroit, Mich. (Holland, Grand Rapids); Washington, D. C. (Fairfax, Va.; Rockville, Hagerstown, Md.; Newark, Del.). Specific station vacancies vary in each district.

Minority volunteers are urged to apply immediately for these locations or any other recruiting district of their choice. Minority recruiters representing all ethnic groups are needed in most states now, with many additional billets scheduled to open in October and November.

All personnel applying for recruiting duty must qualify in accordance with Chapter 11, Enlisted Transfer Manual (NavPers 15909B). Send applications to the Chief of Naval Personnel (Pers-5021).

AEGIS AND HARPOON MISSILES COMPLETE SUCCESSFUL TEST FIRING

Test firing of the Aegis missile system and the Harpoon missile was recently completed at the Pacific Missile Range.

Aegis scored its 10th hit in 10 firings against a variety of air targets, intercepting subsonic and supersonic targets at both high and low altitudes. Designed as the Fleet's future anti-air defense system, Aegis is capable of automatically detecting, tracking and intercepting hostile missiles and aircraft. The system requires only one human action--closing the firing key.

In another significant test, two Harpoon missiles were fired for the first time from a large surface combatant, USS Sterett (CG 31), destroyed a drone patrol boat at over-the-horizon range and hit a destroyer hulk. Both hits were made under difficult weather conditions. Harpoon now has a score of 25 successful firings in 28 tries. The missile is being developed as an all-weather, antiship weapon which can be launched from aircraft, surface ships and submarines.

• NAVY'S TOP CANDIDATES FOR NEY AWARD ENTER FINAL ROUND

Finalists in this year's Ney Award Program were recently visited to determine the winners for the 18th annual awards. One winner from each of four categories will be chosen by representatives of the Navy Food Service Systems Office, the Bureau of Medicine and Surgery and the Food Service Executives Association. Finalists in each category are:

- Large afloat--USS Ajax (AR 6), USS Canopus (AS 34), USS Constellation (CVA 64) and USS Prairie (AD 15).
- Medium afloat--USS Concord (AFS 5), USS Dale (CG 19), USS Shasta (AE 33) and USS Towers (DDG 9).
- Small afloat--USS Cree (ATF 84), USS Illusive (MSO 448), USS Pargo (SSN 680) and USS Welch (PG 93).
- Ashore--NavSta Argentia, New Foundland; NAS Guantanamo Bay, Cuba; NTTC Corry Station, Pensacola, Fla.; and NAS Whidbey Island, Oak Harbor, Wash.

• COMTWELVE PLANS TO OPEN NAVY BICENTENNIAL MUSEUM

A Navy and Marine Corps museum is scheduled to open at the Twelfth Naval District Headquarters Building, Treasure Island, San Francisco, Calif., as part of the ComTwelve Navy Bicentennial celebration. Dedicated to the past, present and future role of the Navy and Marine Corps in the Pacific, the museum will display ship models, photographs, documents, military uniforms and other historical items in the rotunda of Building One. Museum doors are scheduled to open to the public on 1 Oct 1975 and remain open through 1976. There is a possibility that it may become permanent.

• NAVY WINS AND PLACES IN INTERSERVICE ALL-EVENTS BOWLING CHAMPIONSHIPS

The Navy women's bowling team captured the 1975 interservice all-events women's bowling championship at Dayton, Ohio, beating Army women bowlers by more than 430 pins. The men's team finished second in all-events men's competition, falling short of the Marines by just 143 pins. The three-day tournament featured men and women bowlers from Navy, Marine Corps and Army included competition in team, doubles and singles events.

In other events, Navy won both men's and women's team competition, led in individual pins for men's and women's teams and placed first and second in women's doubles. YN1 Dottie Morgan, ADCOM, NTC San Diego, won the interservice women's all-events championship for the second time by totaling 3218 pins in 18 games. AWC Richard Nicholson, HS-1, NAS Jacksonville, Fla., placed third in the men's all-events with 3506 pins.

PACE Graduation Aboard Midway

Eight USS *Midway* (CVA 41) sailors were recent participants in a very unusual graduation—the first graduation ever held aboard a U. S. naval vessel.

The eight men received associate of arts degrees from Chapman College, Orange, Calif., which provides onboard instructors under the Navy's Program for Afloat College Education (PACE).

Since PACE began on *Midway*, the program has grown from 68 to 230 students currently enrolled in 18 courses.

The carrier's curriculum has to be flexible to permit students and faculty to meet the ship's operational commitments and participate in shipboard drills. It's not unusual, for example, for an entire class to "disappear" in order to take part in a general quarters drill.

From the standpoint of class attendance and enthusiasm, PACE has been successful. One of the graduates, AQ1 Michael Johnson, said, "It is much more enjoyable to study through PACE than by correspondence course. The classes are scheduled and you get more out of personal contact with the professors."

The other men participating in *Midway's* recent graduation ceremony included HM3 Michael W. Barron, LT Robert N. Caton, DSCS Douglas L. Hawkinson, CWO2 Russell D. Hulsing, AE1 Steven C. Jones, RM1 Daniel Moran and PN2 Charles E. Netz. Three other sailors who received associate of arts degrees, but were unable to attend the ceremony, included YNC Denzil R. Roberts, PN1 Duane A. Schlismann and PCC John G. Delvin.

A Degree for CWO REED

"I think PACE (the Program for Afloat College Education) is one of the best people-oriented programs the Navy has adopted for the fleet sailor. It allows the seagoing sailor to work on his education while seeing the world and learning a skill. Increased education makes the fleet sailor more mature, more effective and more adaptable to the increased complexity of modern military service."

Those were the words of Chief Warrant Officer Raymond L. Reed of USS *Kitty Hawk* (CV 63) when he recently became one of the first Navymen to earn his bachelor's degree under PACE.

This program offers men aboard naval vessels a chance to begin or augment their college education. Aboard *Kitty Hawk*, 564 sailors took advantage of PACE last year. The program is administered by San Diego's Chapman College through the Educational Services Office aboard the carrier.

Kitty Hawk's program offers a choice of 23 different courses in six major areas of study: English, math, sociology, psychology, business and economics. It costs the students about $15 to register, with an additional cost for books.

CWO Reed is radio officer and communications radio division officer onboard *Kitty Hawk*. His educational background consisted of various programs. "I spent a semester on campus at John Brown University in Silom Springs, Ark. Later, I took some USAFI correspondence courses and University of Maryland extension courses."

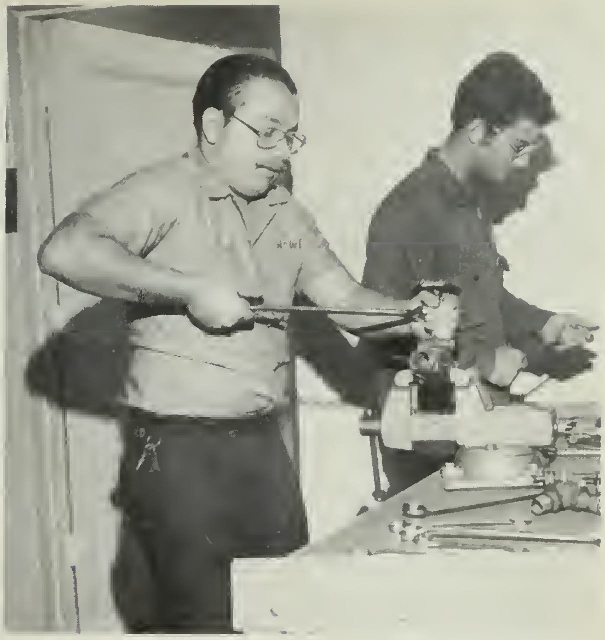
Reed also took part in CLEP (College Level Examination Program) and attended the Chapman College Residence Education Centers at NAS Miramar and NAS San Diego.

New Training Method: Marine Propulsion Skills

An effective method of training has been initiated with the engineering systems training department at the Pacific Fleet Training Center, San Diego, Calif. The Marine Propulsion Skills course provides training in engineering knowledge skills to fleet personnel in the MM, BT and EN ratings.

The course contains 14 learning modules covering knowledge/skills appropriate to all engineering propulsion systems, 35 lessons and eight job performance programs. The course can be successfully completed by an experienced fireman in 10 days.

The individualized learning system (ILS) provides the student with a "carrel," or enclosure, equipped with an audio cassette tape deck and frosted, visual playback, viewing screen. Each of the 14 carrels permits individualized instruction through the use of four learning areas: programmed instruction, audiovisual instruction, audio instruction and self-study guide. (Articles about individual learning systems have previously appeared in the August 1972 and October 1974 issues of ALL HANDS.)



The Marine Propulsion Skills course, first to be tailored to this new method, includes metal fasteners and hand tools in Module One; pipe tubing and fittings in Module Two; and packing, gaskets and insulation in Module Three, among others. The 35-lesson course contains three worksheets and a job performance program.

The student is given progress checks and job performance tests to measure comprehension. At the end of each module, the student is given an examination on the material which he or she has just covered. If the student passes, he or she then proceeds to another module of choice. However, any single incorrect answer on the end of a module test requires that the student review the subject matter and retake the test.

There are many advantages. Each student is exposed to the same amount of knowledge but the time required to comprehend the material may differ. Under formalized lock-step classroom training, an instructor stands before the students and lectures the entire class. This sometimes results in a student not fully comprehending all the subject matter.

Lock-step training establishes 62 per cent as the minimum passing grade, allowing a student to pass while missing 38 per cent of the material. ILS training requires a student to score 100 per cent on all progress checks and tests before proceeding to the next lesson. Lock-step instruction progresses at the pace of the average student while ILS training permits slow students to progress at their own pace and does not impede progress of faster students.

This new concept of propulsion training was initiated at the San Diego Fleet Training Center after liaison with the Propulsion Engineering School at Great Lakes, Ill. Formally established in early 1974, ILS began operation in January 1975. Fleet response has been enthusiastic. Quota availabilities can be obtained by telephone: autovon 958-1664/1668 or commercial (714) 235-1664/1668.

Correspondence Courses

The Chief of Naval Education and Training Support recently issued the following list of new and revised Navy Correspondence Courses. Those marked with an asterisk are confidential, all others are unclassified.

Enlisted Courses	NavTra or NavEdTra No.	Supersedes	No. Assignments
Aircrew Survival Equipmentman 3&2	91629-1F	91639-1E	13
Aviation Antisubmarine Warfare Operator*	91688-A	91688	15
Aviation Electronics Technician 2	91370	91613-2B	16
Aviation Electronics Technician 3	91369	91613-2B	22
Aviation Maintenance Administrationman 1&C	91499-2	91499-1	8
Aviation Storekeeper 3&2	91674-2	91674-1A	40
Electronics Technician 3&2 Part II Radar	91237	91375-3A	18
Journalist 3&2	91452-3	91452-2	19
Gunner's Mate Technician 3&2	91377-D	91377-C	15
Operations Specialist 1&C*	91268-2	91268-1A	11
Patternmaker 3&2	91549-2	91549-1A	12
Photographer's Mate 1&C	91649-E	91649-D	15
Postal Clerk 3&2	91401-3D	91401-3C	10
Radioman 1&C*	91405-4	91405-3C	11
Ship's serviceman 3&2	91447-2A	91447-2	9
Sonar Technician 1&C*	91265-2	91265-1	7
Officer Courses			
Disbursing, Part II	10424-A2	10424-A1	6
Navy Admiralty Law Practice	10725-A3	10725-A2	2
Navy Food Service Management	13108-1	13108	6
Navy Missile Systems*	10409-B1	10409-B	13
Operational Communications*	10760-C1	10760-C	8
Principles of Naval Engineering, Part I	10507-3	10507-2	11
The Process of Management	10947-B	10947-A2	5

School for Welders

Welding is one of the most interesting, exciting and yet important phases for young men attending Steelworker "A" School at the Naval Construction Training Center, Port Hueneme, Calif.

During the 12-week school, a total of four weeks is devoted to teaching the basics of welding to young steelworkers. The first two weeks students receive instruction in gas welding, after which two weeks are spent on arc welding.

Each phase begins with three to four hours of theory. After that, time is spent "learning by doing." Closely supervised by their instructors, students apply the theory in learning the basics of welding.

In gas cutting, they learn to hook up regulators, hoses, torch butts and cutting attachments. Then students are instructed in proper methods of making straight, bevel and hole cuts. As they continue in this phase, attention switches from gas cutting to gas welding.

The old adage "practice makes perfect" describes the learning process students face; they may not come out as perfect welders but it isn't for lack of practice.

Upon completion of the two-week gas phase, students change over to arc welding. In this section, students learn the proper methods for adjusting direct current for desired amperage and polarity. Safety precautions are highly stressed.

Using this knowledge on which to build, the students spend more than 60 hours in the shop in practice and testing. It is an exciting phase for all students but one of extreme importance for those entering the steelworker rating.

At NCTC new welders receive the basic instruction that will enable them to carry on the "Can Do" spirit of the Seabees serving all over the globe.

—Story and photos by JO3 Scott D. Smith

Service Colleges for Officers

Naval officers: are you interested in attending a service college? ALL HANDS, through this presentation, hopes to spark your attention by listing what schools are available, which officers are eligible, how selections are made and the objectives and importance of these colleges. Historically, service colleges have played a major role in the professional development of leadership in the Armed Forces by professionally broadening selected officers to prepare them for greater responsibilities. The career officer is at the core of this program.

Policy changes have been made to ensure that only the best-performing officers are selected for a service college, and that a high percentage of selectees actually attend a service college. These changes follow an extensive analysis made recently by the Chief of Naval Personnel to determine the effectiveness of service college selection and assignment procedures.

As outlined in the new BuPersNote 1301 dated 14 Apr 1975, the objective of the Navy's service college program is to develop improved capability in selected naval officers to provide intellectual leadership and exercise sound judgment in defense matters.

Individual service colleges and their varying curricula emphasize different aspects and levels of service and joint functions, resource management and national strategy and policy. To satisfy Navy requirements in senior command, key staff and policy-making positions in the national and international security structures, CNP has established service college student input goals. These state that 30 to 35 per cent of captains will have attended a senior service college and 25 to 35 per cent of lieutenant commanders will have attended a junior service (command and staff) college.

The service college program includes the following schools:

Senior Colleges (U. S.)—Naval War College (Naval Warfare Course), Air War College, Army War College, Foreign Service Institute (Senior Seminar in Foreign Policy), Industrial College of the Armed Forces, National War College.

Senior Colleges (Foreign)—Canadian National Defense College (one per year for three years; fourth to USMC), Greek Naval War College, Inter-American Defense College, NATO Defense College, Norwegian Naval Defense College, Royal College of Defense Studies (one each odd-numbered year).

(Junior Colleges (U. S.)—Naval War College (Command and Staff Course), Air Command and Staff College, Armed Forces Staff College, Army Command and General Staff College, Marine Corps Command Staff College.

Junior Colleges (Foreign)—Brazilian Naval War College, French Naval War College, German Command and General Staff College, Indian Defense Service Staff College, Peruvian Naval War College, Royal Air Force Staff College, Royal Naval Staff College, Spanish Naval War College (one each even-numbered year), Taiwan Naval War College, Uruguayan Naval War College, Venezuelan Naval War College.

Negotiations are in progress to expand the foreign service college program. A small number of additional colleges may be added in later years.

Service college programs are for selected Regular, Reserve and TAR officers in the grades of commander and captain for senior colleges, and in the grade of lieutenant commander for intermediate colleges. Some officers in these grades, however, are not eligible, since service college attendance is not warranted or essential for effective performance in future assignments. Ineligible officers are those in the Chaplain Corps, Dental Corps, Nurse Corps, limited duty and warrant officers.

Normally, an officer will be selected to attend only one service college at a given level. Further, attendance at a junior college is not a prerequisite to selection for a senior service college.

By FY-76, all previous selection processes will have been consolidated into a single pattern which will afford all eligible officers two opportunities for junior service college selection, commencing in the year of selection to lieutenant commander. There will be three opportu-

nities for senior service college selection, commencing in the year of selection to commander, with the final screening in the year of selection to captain.

An officer selected may attend service college during any one of the three years following his selection. During the period of transition to the revised selection procedures, an officer presently banked is eligible to attend until his promotional group is reviewed by the next selection board.

Commencing in FY-76, the majority of service college selections will be made by promotion selection boards reconstituted as service college selection boards. These boards will consider unrestricted line and Supply Corps officers in the eligibility zones for captain, commander and lieutenant commander. A separate service college selection board will convene annually in November to screen mid-grade unrestricted line and Supply Corps commanders and lieutenant commanders, and to make all restricted line and staff corps (less Supply Corps) and TAR selections.

For officers of the unrestricted line and Supply Corps, selection quotas are provided to the board based on the sizes of promotional groups to be considered. Restricted line and staff corps officers (less Supply Corps) are nominated by appropriate flag officer designator advisors, based upon their availability to attend during the next year following board selection. Six nominations per quota to be filled during the ensuing year are presented to the selection board.

Service college selection boards are charged to select the best qualified officers from among those eligible, regardless of their warfare specialties, subspecialties or current assignments. When appropriate, the board may recommend attendance at a specific college, based on a selectee's background.

Assignment slating for new selectees occurs after each selection cycle, to determine attendees for that year and which colleges they will attend, and to make tentative slatings for the two following years. While it is not necessary for officers to indicate a desire to attend a service college, it is appropriate to indicate a choice of college in the "Remarks" section of the Officer Preference Card.

Naval officers of the restricted line and staff corps attend service colleges, subject to the following constraints:

- Engineering duty officers (ships engineering) attend Naval War College and Industrial College of the Armed Forces, ICAF (one each to NWC junior and senior course, and to ICAF annually).
- Engineering duty officers (ordnance engineering) attend ICAF only (one annually).
- Aeronautical engineering duty officers (aeronautical engineering and aviation maintenance) attend ICAF only (one each, annually).
- Special duty officers (cryptology) attend Naval War College, ICAF and National War College (Naval War College annually, one to senior course and two to junior course; one every two years to ICAF; and one every third year to National War College).
- Special duty officers (intelligence) attend Naval War College, AFSC, National War College and ICAF.
- Special duty officers (public affairs) attend Naval War College only (one each may qualify for assignment to senior and junior courses, annually).
- Special duty officers (geophysics) attend Naval War College, AFSC and ICAF only (Naval War College, one to senior course and one to junior course annually; two annually to AFSC; and one every third year to ICAF).
- Medical Corps officers attend ICAF only (one officer biennially; odd-numbered FY).
- Medical Service Corps officers attend USMC Staff College and Armed Forces Staff College only (two total, annually).
- JAG Corps officers attend Naval War College and AFSC only (one annually to Naval War College, alternating junior and senior course, and one to AFSC).
- Supply Corps officers attend Naval War College, ICAF and National War College only (Naval War College: five to senior course, except every third year, which will be four, and eight to junior course, seven to ICAF; eight to AFSC; and one to National War College every third year).
- Civil Engineer Corps officers attend Naval War College, ICAF, AFSC and National War College only (Naval War College, one annually to each course; one to ICAF; four to AFSC; and one every third year to National War College).

Officers attending a foreign college should have potential for a utilization tour in the country or area. Officers must be sufficiently fluent in the language of the host country to undertake the course of instruction. Preparatory language training may be provided, if necessary.

Officers attending the Naval War College must hold a baccalaureate degree.

Officers normally will be slated to attend a service college at or near their current prospective rotation dates (PRD), during the three-year period following selection. Certain types of duty, however, may result in deferral from attending at PRD. Where deferral is necessary, attempts are made to assign selectees to service colleges immediately after the deferral assignment. While the submarine and nuclear surface communities are deficit-manned, these officers will attend service colleges only in token numbers.

Should deferral result in an officer not attending during the three-year period following selection, he loses current eligibility and becomes subject to reselection by subsequent board action. It is anticipated that an officer will have at least an 80 to 85 per cent overall probability of eventual attendance if selected when first eligible.

A selected officer who declines attendance at a service college must do so by official letter to the Chief of Naval Personnel. He will then be ineligible for later selection to the category (junior or senior) of service college which he declined. However, deferral requests for compassionate reasons are not considered declinations.

Officers accepting orders to a service college incur an active duty obligation of two years, commencing upon completion of the course of instruction. In addition, education beyond one year is subject to a two-for-one payback. The period of obligated service for service college is additional to any other obligated service which may have been incurred previously.

—JO1 Ken Testorff

Postgraduate Education

Does your latest Officer Preference Card reflect your postgraduate preferences accurately? According to the new OpNavNote 1520 dated 14 Apr 1975, your next opportunity for selection for graduate level education will be August 1975.

This new notice provides information on the scope of the Navy postgraduate educational program and other advanced education programs presently planned for the academic year 1976-77 (FY7T-77). It also establishes officer eligibility for consideration by the 1975 August regular postgraduate selection board and the FY7T and 77 doctoral study selection board. In addition, it provides information on academic prerequisites and guidelines for the various curricular programs, and provides instructions to officers for indicating or updating their postgraduate curricula preferences, or for submission of official letter request, as appropriate.

The Navy's postgraduate program is designed to meet subspecialty billet requirements for officers educated at a graduate level, that is, less than a master's, master's or doctorate degree. Many unrestricted line officers need additional education beyond the course content and level they have upon entry into the Navy in order to qualify as subspecialists. Subspecialty areas are essential to the overall effectiveness of the Navy.

The restricted line and staff corps communities fulfill the requirement for exclusive concentration in specific major areas of support. Additional education for these communities in certain academic disciplines is essential for effective support of the operating forces.

The Navy's program is designed to capitalize upon the individual officer's abilities, experience and potential by extension of his studies to include specialized areas and to equip officers with postgraduate education at the master's or doctor's degree level to meet requirements. Participation in the postgraduate program normally is limited to one curriculum which will raise the professional development level of the individual officer.

Officers who have attained a P or D code in a given area, either through the postgraduate program or on their own initiative, normally will not be selected for a master's level postgraduate curriculum in the same or closely allied area.

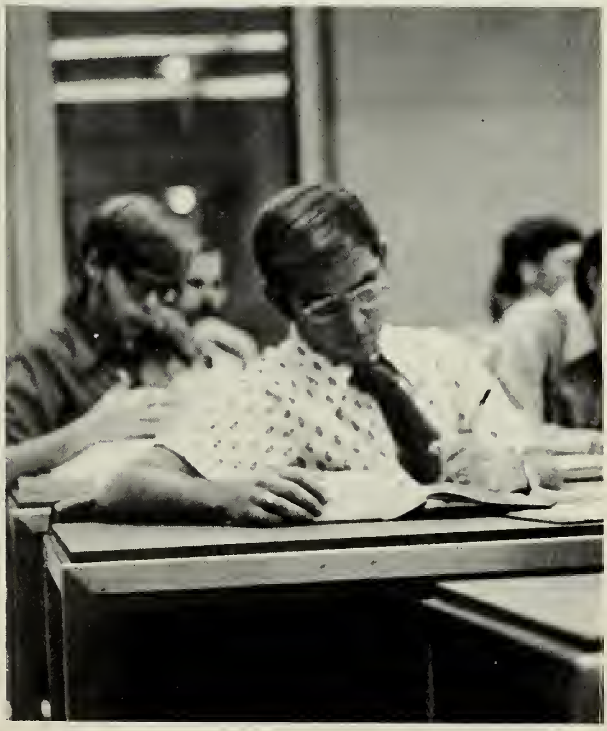
For example, an officer with a P-code in the field of management or international affairs will not be selected for a course of study leading to another P-code in these fields, unless the present P-code was obtained through an off-duty educational program and is not applicable to the officer's designator. An officer with a P-code in an engineering or science field will not be selected for a course of study leading to another engineering or science P-code. An officer with a 0000 P-code is eligible for any course of study for which otherwise qualified.

There is a requirement for a limited number of officers with dual masters' in an engineering and a management area.

Graduates of the Master of Science (MS) Aeronautical Systems Program, University of West Florida, are advised that the Chief of Naval Personnel (CNP) does not award a subspecialty code for completion of the program. In addition, it cannot be assured that credits earned short of a degree are completely acceptable for advanced academic standing at another institution. Therefore, graduates of the MS Aeronautical Systems Program, University of West Florida, are eligible for all curricula in accordance with their designators.

Detailed information on postgraduate curricula conducted at the Naval Postgraduate School (NAVPGSCOL), Monterey, Calif., and general information on curricular programs at the various participating civilian educational institutions can be found in the Catalog of NAVPGSCOL. This is published every two years by NAVPGSCOL and distributed to all major ships, large staffs, unit commands and certain shore activities. (Commands not on the normal distribution list and those needing additional copies of the catalog may request it by sending a check for $1.25 to the Navy Exchange Bookstore, Naval Postgraduate School, Monterey, Calif. 93940.)

NAVPGSCOL's engineering science curriculum is provided as a tool for accommodating officers who desire an advanced technical education but who are deficient in mathematics or the physical sciences. The curriculum's flexibility permits those officers with undergraduate background deficiencies and those who last



attended a formal college or university several years ago, to spend a period—usually six months (two quarters)—undergoing course work in undergraduate mathematics and the physical sciences in preparation for entry into advanced technical curricula.

Graduate curricula at Monterey, varying in length from 12 to 24 months (four to eight quarters), are designed to provide officers with the knowledge required for intelligent technical direction and management of the Navy's activities in such fields as administrative science (material, financial, personnel, human resources management), aeronautics, communications engineering, computer science, electronics, underwater acoustics, environmental sciences, computer systems, telecommunications systems, MSC transportation, naval engineering, naval intelligence, antisubmarine warfare, operations research and systems analysis, systems acquisition management and weapon systems engineering. Flexibility in the design of these curricula permits tailoring of programs to provide emphasis in areas of particular interest to the unrestricted and restricted line and staff corps officer communities.

Some graduate curricula in specific fields of study are conducted at civilian educational institutions. The civilian university programs supplement the programs of the NAVPGSCOL.

In late 1970, the Chief of Naval Operations (CNO) directed establishment of a CNO Scholars Program whereby a small group of highly selected officers would be afforded an opportunity to pursue graduate education in fields of study compatible with their respective specialty and subspecialty, and within the framework of Navy P-code billet requirements. Applications for this program are processed by a special panel of the postgraduate selection board.

Exceptionally competent officers may be selected for doctoral level education in curricula consistent with the needs of the Navy. This may be accomplished by direct enrollment in the Doctoral Study Program for selected officers already possessing a master's degree, or by continuation of studies in a regular Navy-sponsored postgraduate curriculum in which already enrolled.

The nine-month postgraduate intelligence course conducted by Defense Intelligence School provides instruction in basic principles and techniques of intelligence operations. Upon graduation, officers are normally assigned duties in intelligence-related billets.

Anyone having questions regarding admission procedures or desiring additional information on specific postgraduate curricula may write to the Dean of Admissions, Naval Postgraduate School, Monterey, Calif. 93940, or telephone (408) 646-2391 (autovon: 479-2391).

The newly formed Office of Continuing Education at NAVPGSCOL is in the process of establishing an academic counseling service to assist officers in developing an individual educational plan coordinated with Navy requirements of the subspecialty system. Inquiries may be directed to the Program Manager for Educational Counseling (Code 530) at the NAVPGSCOL, or telephone (408) 646-2984 (autovon: 479-2984).

Officers assigned to postgraduate study under the Navy's postgraduate program must agree that upon completion or termination of a graduate education program they will serve on active duty for a period equal to three times the length of the period of that education, or a maximum of four years' service.

The next regular postgraduate selection board will be convened by CNP in August 1975; the Doctoral Study Program selection board will be convened 27 Aug 1975 and 25 Feb 1976.

The regular postgraduate selection board will pick a group of qualified officers for postgraduate education to fill quotas which reflect the Navy's subspecialty billet requirements in the various fields of study available. Selection of officers for fully funded programs will be on the basis of performance, academic qualifications and stated preferences of the individual. Proven academic performance in off-duty educational programs will enhance selection. It is worthy to note that there is a shortage of officers qualified for input into the engineering fields of study.

Officers selected for the CNO Scholars Program will be notified immediately by individual letters. All other selectees will be designated and thereafter classified as principals (assignable in academic year 1976-77 through 1978-79) or alternates (assignable, if available, only as vacancies occur during academic year 1976-77). The complete selection list will be published as an annual BuPersNote 1520 at the earliest feasible date after completion of the postgraduate selection board.

The Doctoral Study Program selection board will consider and select officers for the direct enrollment and continuation programs.

Assignment to postgraduate instruction is not assured until orders are executed. Although every effort is made to assign the maximum number of selectees to postgraduate instruction during the academic year for which they have been selected, individual assignments must remain subject to availability of qualified reliefs and the overall requirements for experienced officers in operational billets. All officers ordered into postgraduate education programs are required to carry a full academic load on a year-round basis.

The determination of continuation status for those officers who fail academically or fail selection for promotion will be made by CNP, in coordination with the Chief of Naval Education and Training (CNET), based upon the recommendation of the Superintendent, NAVPGSCOL, for students under his cognizance, or the reporting senior for those officers enrolled in civilian institutions.

All officers desiring fully funded graduate education at the NAVPGSCOL or at civilian universities should take appropriate preparation courses before selection for resident programs. Under the guidance of the NAVPGSCOL Office of Continuing Education, new refresher and preparation courses are being developed for individual self-study. Differing from correspondence courses, these offerings are in the Personalized System of Instruction (PSI) and include contact with a qualified naval officer tutor in the local area. Courses available are listed in the new Continuing Education Catalog. Further information may be obtained by writing to the Director of Continuing Education (Code 500) at the NAVPGSCOL.

Officers selected for postgraduate curricula at NAVPGSCOL or civilian institutions should make every effort to complete appropriate refresher courses before reporting. Until the development of PSI courses in mathematics, the NAVPGSCOL will provide a special self-study course in mathematics (calculus, with brief preliminary coverage of trigonometry and analytic geometry), designed for completion in about 150 hours. The course material may be requested directly from the Superintendent, NAVPGSCOL (Code 0212), Monterey, Calif. 93940.

An officer whose latest preference card does not reflect his postgraduate preferences accurately should submit a new card. In the case of the current August 1975 board, preferences considered will be those that were on file in the Bureau of Naval Personnel as of 1 Jun 1975. Although letter requests are not generally required, an officer has the option of submitting a letter to CNP (attention of the individual's cognizant assignment officer), calling attention to any facts which he feels will particularly qualify him for one or more curricula, or those qualifications which otherwise might not be obvious from information in his official BuPers record.

All officers not in educational group 1976, but who are interested in the CNO Scholars Program, should forward a letter request to CNET (Code N1313). Such requests must be received by 1 Jun in the year selection is made. Individual officers should include in their requests the desired field of study; a resume of prior academic achievements, with transcripts, if available; and Admission Test for Graduate Study in Business (ATGSB) or Graduate Record Examination (GRE) test scores, if previously taken.

All officers interested in the direct enrollment Doctoral Study Program should forward applications to CNET (Code N1313) during the year to correspond with convening dates. Applications not received in time for consideration by the August 1975 convening date will be held for the February 1976 convening date.

Individual officers should include in their request for the direct enrollment Doctoral Study Program the following:

- Desired field of study. Where it is feasible and compatible with the individual's prior academic background and designator, an alternate field of study should be indicated in case the primary choice is not compatible with Navy requirements for Ph.D. educated officers.
- Resume of prior academic achievements, supported by transcripts or summaries of work completed.
- ATGSB or GRE test scores if tests were taken previously.
- A statement reflecting the individual's current status regarding admission on his own initiative to a civilian university as a doctoral degree candidate; as being in current pursuit of doctoral studies, with an indication of number of hours of advanced course work completed; or as to the steps anticipated towards contacting civilian universities or NAVPGSCOL to determine eligibility for admission to a doctoral degree program.

Officers interested in the continuation Doctoral Study Program should, at least nine months before completion of their master's degree program, forward a letter request to CNET (Code N1313), copy to individual's detailer, for extension of duty under instruction tour to permit completion of Ph.D. studies. Individual requests will be endorsed by the commanding officer and will include the following data:

- Curriculum in which enrolled and current status insofar as completing master's degree requirements.
- Estimated time required to complete Ph.D. requirements.
- Whether or not candidates have been admitted to doctoral degree candidacy (either at NAVPGSCOL or at a civilian university), as appropriate, with supporting documentation from the school concerned.
- Transcripts or summary statement reflecting grades and course work completed to date under the master's degree program.

In order to enhance their selection opportunity, officers who do not have noteworthy undergraduate records or who last attended a formal college or university several years ago should make every effort to enroll in nontraditionally delivered undergraduate or graduate level courses, on their own time, to strengthen their academic background and to prove their capability to successfully pursue graduate study. The NAVPGSCOL Education Counseling Program Manager (Code 530) should be contacted for assistance and guidance.

At the earliest feasible date, those officers interested in civilian university curricula requiring the ATGSB or GRE should make arrangements to take the tests, if not taken previously. Information on test dates and registration procedures may be obtained by writing to the Educational Testing Service, Box 1502, Berkeley, Calif. 94701, or Box 955, Princeton, N. J. 08540. Officers registering to take the test are requested to indicate in the "score reports" column of the registration form the following sponsor code, "R5806-CNET 1313." This will ensure that copies of the test scores are received by CNET.

Officers who have taken one or both of the tests on their own initiative should either forward a copy of their scores to CNET with a copy to CNP (Pers-3613) or request the Educational Testing Service to send a copy to CNET. The availability of these scores will assist the postgraduate selection board in evaluating an officer's chances of gaining admission to participating civilian universities.

Officers, especially those from Officer Candidate School (OCS) and NROTC commissioning sources, should ensure that their official BuPers records contain a complete transcript (showing degree awarded and date). All officers should ensure that transcripts of any advanced undergraduate or graduate course work completed on an off-duty basis are forwarded to CNP for inclusion in their official record with copy to NAVPGSCOL at the earliest feasible date following completion of such course work.

Officers selected for programs conducted at various civilian educational institutions will submit a formal application for admission in compliance with instructions provided by CNET (Code-N1313).

Officers selected by the regular postgraduate selection board, but who do not desire postgraduate education, may decline their selection in writing to CNP (Pers-440). Timely submission of declination letters is necessary in order to facilitate the orderly assignment process under the 12-month advance slating concept.

—JO1 Ken Testorff

on the Educational Front

ALL HANDS VISITS

"Congratulations on your selection for graduate education. We hope to count you among those enrolled at the Naval Postgraduate School."

Most naval officers find great satisfaction in receiving a letter notifying them of their selection for graduate education. This satisfaction may be tempered somewhat as the selectee begins to contemplate a full-time graduate course of study—what it will entail, where it will be offered, what will be expected?

Some doubts may arise in the officer's mind as to his or her ability to pursue graduate level education, leading to a request for more information. Sometimes the information obtained is not as current as it might be, creating possible confusion and a slightly distorted view of what postgraduate education can mean to the professional naval officer.

In anticipation of the foregoing, this article attempts to furnish information about graduate education, as provided at the Naval Postgraduate School (NPS), to help eliminate misunderstandings and increase awareness on the part of those selected. This tack is taken because the majority of those naval officers selected for graduate education will attend NPS, which is located at Monterey, about 115 miles south of San Francisco on the Pacific coast. Joining them will be officers from the other U. S. uniformed services and from more than 20 allied nations.

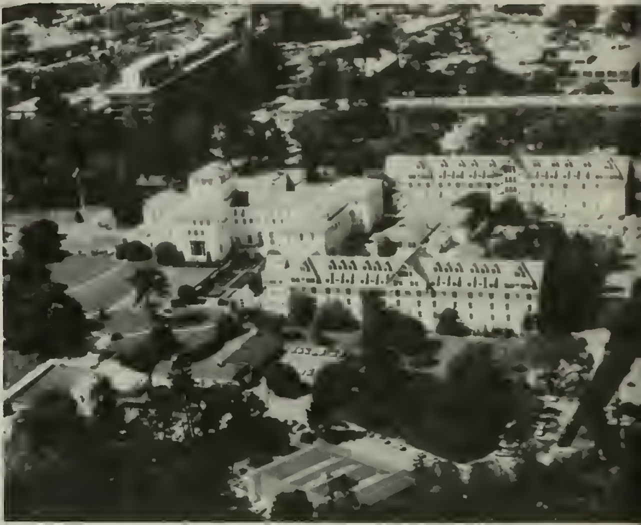
Admissions Procedures

U. S. Navy officers interested in admission to NPS are referred to OpNav Notice 1520, which describes postgraduate education programs. This directive outlines the various education programs available and indicates the method for submitting requests for consideration for each. Under these guidelines, the Chief of Naval Personnel convenes a board annually to select officers for postgraduate education. The selection is based upon professional performance, academic background and ability, within quotas which reflect Navy needs in the various fields of study available.

Officers on duty with other branches of service are eligible to attend NPS. They should apply in accordance with the directives of their respective services.

General qualifications for admission are similar, with most curricula at Monterey requiring a baccalaureate degree with above-average grades. Completion of calculus with above-average grades is required for certain curricula, while others require only one or two mathematics courses at or above the level of college algebra or trigonometry. For specific requirements of each curriculum, the NPS catalogue should be consulted. Any officer may obtain an evaluation of his academic qualifications for admission by contacting the Dean of Curricula, Naval Postgraduate School, Monterey, Calif. 93940.

Because many of those selected for graduate education have been out of a formal educational atmosphere for a considerable period of time, a refresher course in mathematics is available from the school. A self-study course in calculus, it can be completed before arrival and will be of great assistance in improving one's mathematics background and restoring study habits. Officers are encouraged to undertake this course, which can be obtained by writing to the Superintendent (Code 500), Naval Postgraduate School, Monterey, Calif. 93940.



Above: Aerial view of Naval Post Graduate School. Right: Electron microscope in use at the postgraduate school.

Upon entry, each student's prior academic record is evaluated for possible transfer of credit. A course given at NPS may be validated when the student previously has taken a course covering the same material. No credit is awarded in this case, but the student is exempt from repeating the NPS course. All graduate level courses taken after completion of the baccalaureate degree may be accepted for credit. Graduate level courses certified to be in excess of requirements for the baccalaureate degree and taken in the last term before award of the baccalaureate degree may be accepted for graduate credit under certain circumstances.

Students are encouraged and permitted to seek validation or credit for courses by taking a departmental examination. This allows students to make use of knowledge gained through self-study, experience, or service-related courses. Through this program, NPS expects to minimize the amount of time required by students to complete their curricular program.

Organization

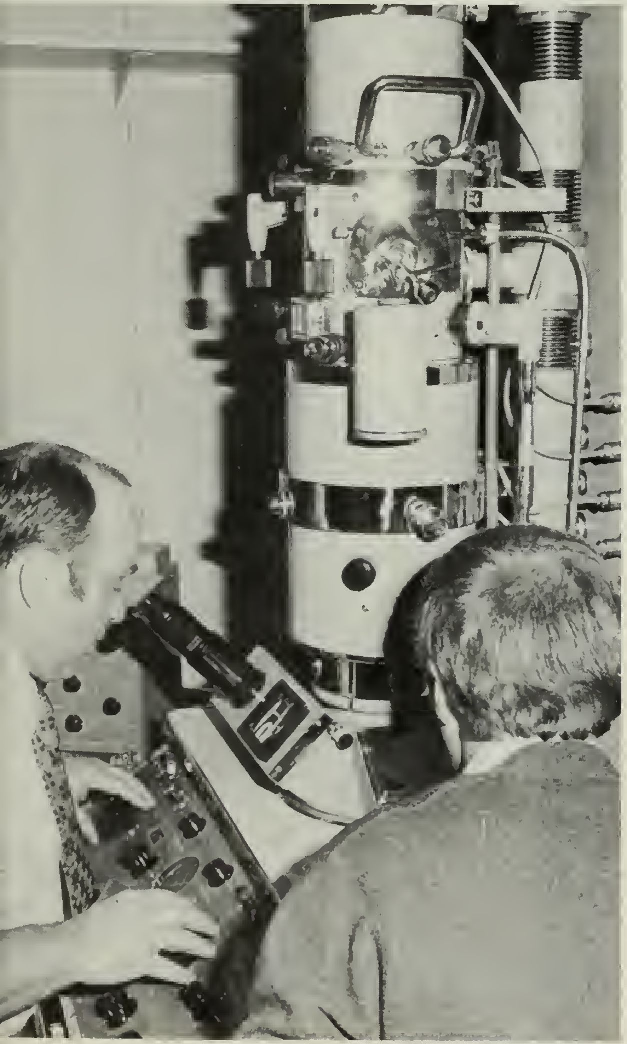
The Superintendent at NPS, currently Rear Admiral Isham Linder, is the school's ranking official. His principal assistants are a Provost/Academic Dean (Jack R. Borsting, Ph.D.), who is the senior member of the

NPS MONTEREY

civilian faculty, a Director of Programs (Captain Donald W. Kiley), a dean of Programs (W. F. Koehler, Ph.D.), and a Director of Military Operations and Logistics (Captain Edward E. Riley).

The academic programs and direct supporting functions are administered and operated through a unique organization composed of curricular offices and academic departments. The former are staffed by naval officers, assisted by civilian faculty members, with three primary functions: academic counseling and military supervision of students, curriculum development and management, and liaison with curricula sponsors.

Current curricular areas are administrative science, computer science, aeronautical engineering, electronics and communications engineering, underwater acoustics, environmental sciences, naval engineering, naval intelligence, operations research/systems analysis, antisubmarine warfare and weapons engineering.



Teaching functions and thesis supervision are accomplished by a faculty, which is approximately 85 per cent civilian, organized into nine academic departments and two interdisciplinary groups: aeronautics, computer science group, electrical engineering, government, mathematics, mechanical engineering, meteorology, oceanography, operations research and administrative sciences, operational systems technology group and physics and chemistry.

Degrees and Accreditation

The Superintendent is authorized by law to confer bachelor's, master's, engineer and doctoral degrees in engineering or related fields to qualified graduates of the school. NPS was first accredited in 1962 as a full member of the Western Association of Schools and Colleges. Initial accreditation as an associate member was given in 1955. Specific engineering curricula have been accredited by the Engineers' Council for Professional Development (ECPD) since 1949.

Faculty

There are several factors which establish the integrity of a graduate university. Undoubtedly the most important are the quality and accessibility of the faculty.

The faculty at NPS rate high in both respects. Of the civilian faculty, 82 per cent hold the Ph.D. or an equivalent degree. Ninety-eight per cent of the military officers on the faculty hold advanced degrees. The faculty are active in professional organizations in their fields, many of them holding offices and important committee posts. Because the faculty at NPS have a primary responsibility to teach, students can expect to have designated faculty members carry out the programs of education.

There are no graduate assistants or other supernumeraries acting as buffers between faculty members and students. Also, because the student/faculty ratio is low, academic rapport of unequaled quality is attained.

Faculty members are involved in research, most of which is conducted at the request of Naval Systems Commands, research laboratories and other Department of Defense agencies. Students work along with faculty members in the research effort, permitting the development of theses required for graduation.

Research

Research marks the highlight of the academic experience for students as they enter into real life problem-solving and have the opportunity to bring their newly acquired education to bear upon the process. Faculty members also continue to update their abilities through continued research and support of student thesis projects.

The NPS program has two characteristic features that distinguish it from civilian university research programs.

First is the emphasis on Navy/Defense-related programs. This emphasis is due less to statutory limitations than to student and faculty interest. Most students come to NPS with six or more years of operating experience with the fleet, bringing with them great interest in military problems. Those interests motivate them to seek research opportunities in their graduate studies. Secondly, most students are working toward a master's degree, in which a research thesis may be a major requirement.

There are currently more than 130 research projects underway by faculty/student teams. Of these projects, some of the more promising are those dealing with acoustic propagation in the ocean; optical propagation studies and experiments; operational meteorological prediction; ocean boundary layer studies; signal processing; electronic warfare; tactical and strategic warfare analysis; cost effectiveness; microcomputers; and advanced development in computer acoustic processing.

Facilities

The quality of the research and academic programs is greatly dependent upon the complementary quality of the student body and the faculty. With the modern and Navy-related facilities available, NPS students and faculty are able to undertake significant and timely research.

Each department at the school has developed laboratories and academic support facilities to meet the needs of its students.

At NPS, one finds a range of laboratories housing virtually every sort of equipment needed to test a hypothesis, prove a theory or check out a problem. A linear accelerator, wind tunnels, and laboratories for the study of acoustics, fluids, material science, oceanography, radar and microcomputers constitute some of the facilities. Shipboard equipment frequently supplements these. Sonar problems are simulated in the electrical engineering department computer center either as printouts or on a visual display terminal, where the results can actually be seen as the problem progresses.

The meteorology department at NPS has computer and teletype terminals for access to the Naval Weather Service, weather satellite tracking antennas, and balloon launching facilities. The department also has all the equipment normally associated with a naval weather station, although it does not function as one.

The physics and chemistry department operates lasers in research in plasma physics and laser optics. Atomic research is conducted with the department's linear accelerator, while acoustic characteristics are studied in the anechoic chamber. Acoustical tanks are also used to study properties of underwater sound propagation. Wind/wave relationships are studied in the department's wind/wave tanks, and silting and marine sediment are studied in the sediment tank.

One of the most active facilities is operated by the oceanography department. It is the research vessel *Acania*. Formerly a luxury yacht, *Acania* was converted to an oceanographic research vessel in 1971. The vessel is sponsored by the Oceanographer of the Navy.

In addition to the oceanography department, the departments of physics and chemistry, meteorology, mechanical engineering and aeronautics, among others, conduct research on an interdisciplinary basis. Students, working with faculty, are major users of *Acania*.

Two other key facilities are the W. R. Church Computer Center and the school library.

The computer center houses a complete system to

Below from left to right: Antisubmarine warfare students visit USS Brooke to study ASROC System. Oceanography students in beach laboratory. The Acania, with Mobile Environmental Laboratory aboard, is rigged for fog studies.

support faculty and students in their research and classroom work. Every student at NPS has opportunities to use the computer system. In a typical month, 700 students use the batch-processing system and 150 others are active in the time-sharing mode.

For all types of research and reference, the NPS library contains more than 400,000 books and bound periodicals, research and development documents, bibliographic volumes and pamphlet items. Research and development documents are accessible through the library's computerized information retrieval system, SABIR 3.

In addition to the compilation of computer-generated bibliographies on request, the library offers students a selective dissemination of information service. Students may avail themselves of this and establish continuing subject interest profiles with the Technical Reports Branch.

Subsequently, all input into the SABIR 3 data banks is routinely searched and personalized bibliographies are made available to the participants on a biweekly basis.

Also housed in the library is a television dial access retrieval system. This contains videotape programs which supplement the classroom lectures for several courses.

Student Life

Students discover rather quickly that life at NPS can be a positive experience. The campus is unusually attractive and reflects the beauty of the central coast area of California. A year-round moderate climate permits many outdoor activities, both academic and leisure-time.

Students have no major duties beyond applying themselves diligently to their studies. It is expected that each will maintain a high level of scholarship and develop attributes usually associated with a scholar seeking knowledge and understanding. Program schedules are such that each student should anticipate spending several hours in study each evening to supplement time available for this purpose between classes.

For those officers with families, the Navy provides an attractive housing area called La Mesa Village. About 900 families are in residence at any time in Wherry and Capehart housing and new town houses.

The Village has its own elementary school and a convenience store for occasional food needs. Most personnel use the Navy Exchange on the NPS grounds or use the PX and commissary at Ft. Ord, about five miles north of the school. Medical facilities include an on-base dispensary, which is supported by Ft. Ord's hospital facility. Many other facilities, including recreational, are available on campus or at Ft. Ord.

Prescription for the Future

You may ask, "Should I apply for graduate education?" The words of Vice Admiral B. J. Semmes, written more than ten years ago when he was Chief of Naval Personnel, are offered as an answer. He stated, ". . . performance will be more and more dependent upon the officer's ability to understand and cope with the new scientific environment of which he is a part. Thus, advanced education . . . is sure to become one of the vital steppingstones of his professional career."

As if to emphasize his words, of a group of 37 officers promoted to flag rank last year, 17 hold master's, engineer or doctoral degrees.

Superintendent RADM Isham Linder voices the philosophy of advanced education, saying, "The Navy's graduate educational programs have been developed to provide a small percentage of selected, fleet-experienced officers with advanced technical, scientific and administrative education in areas directly related to naval operational and technological progress. Professional officers must also know how fleet requirements can be translated into efficient procurement action, and this specific educational requirement has led to programs in naval procurement management.

"The curricula at NPS provide programs in each technical area specifically directed at naval requirements, make full use of the officers' experience at sea and are firmly based on academic excellence in examining and adapting the continuing developments of science, technology and analysis."

It is now obvious that a relevant advanced education will be required for almost every naval officer of the future.

Information

Those officers who desire specific information about programs at NPS may obtain additional information by writing to the Superintendent, Naval Postgraduate School, Monterey, CA 93940. For a copy of the NPS catalogue, send a check for $1.25 to the Navy Exchange Bookstore, Naval Postgraduate School, Monterey, CA 93940.

NITINOL:

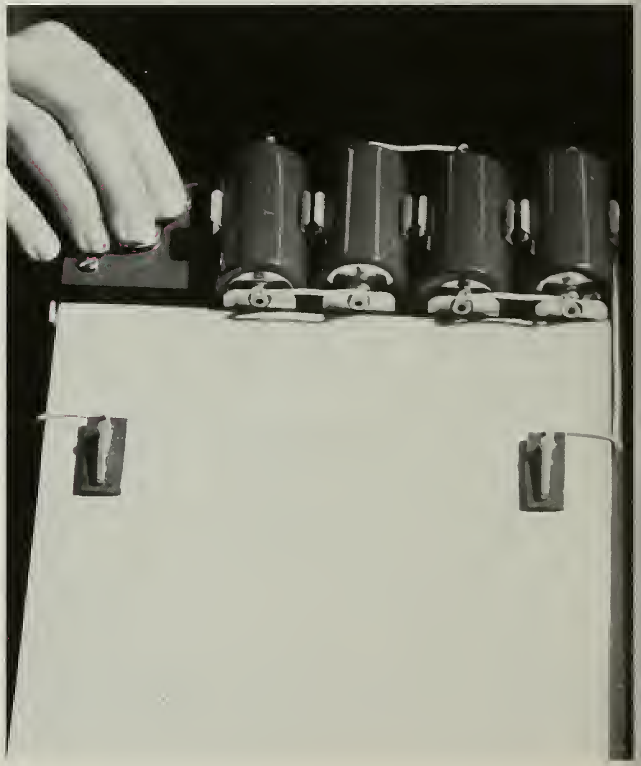
METAL WITH A MEMORY

"Hey, Charlie, can I use your blowtorch for a few minutes?"

"What's the problem?"

"I got a fender wrinkled up and I want to straighten it out."

Farfetched? Not at all if your fenders are made of *Nitinol*, the Navy-developed metal with a memory. Form a piece of this metal into any useful shape, heat treat it at appropriate temperature, and it will remember that form from then on. If the piece, like the fender, is deformed by bumping, twisting, or what have you, the application of a bit of warmth will result in the metal's re-forming itself to the original shape.

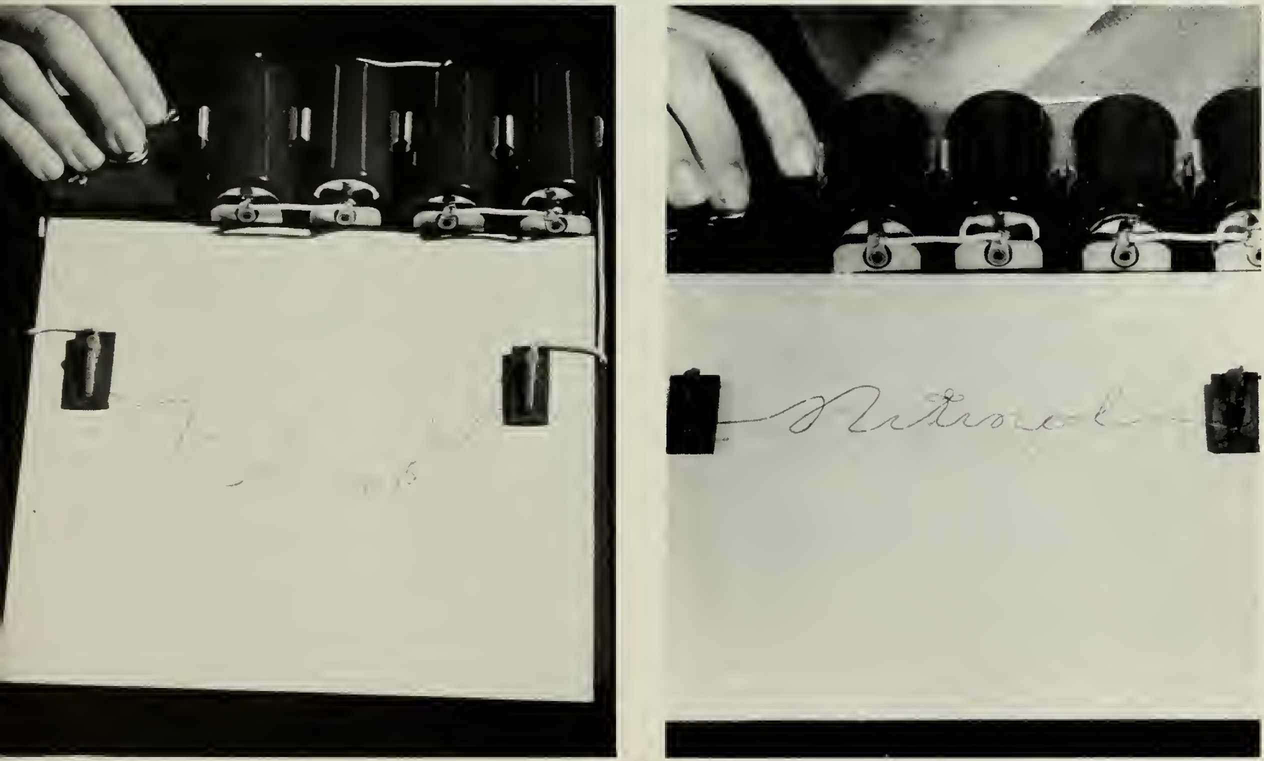


Well, say the experts, the foregoing car repair incident *is* possible, but costs today preclude use of this strange metal in such large quantities. Tomorrow, next year? No—but in the sometime future, maybe. However, *Nitinol does* have important uses in medical and dental techniques, and in aerospace industry.

Nitinol is an alloy which was discovered and developed at the U. S. Naval Ordnance Laboratory, now part of the Naval Surface Weapons Center (see below) located at White Oak, Md., just outside Washington, D.C. Its name comes from the two elements composing it, NI (Nickel) and TI (Titanium), and NOL for Naval Ordnance Laboratory. The metal is noncorrosive, nonmagnetic, and lightweight. Its memory is unique, and why it works is still being researched. However, we do know how it works, and a number of activities, both military and civilian, are tailoring it to satisfy their requirements. The alloy has been made available to the civilian community through the Navy's Technology Transfer Program which is designed to offer the results of the Navy's research and development for translation into nonmilitary uses.

Now to get back to its potentialities in other areas. Take medicine. One problem in setting a broken bone, for example, is that of ensuring intimate contact between the two halves at the break. If there is a gap

Left: A time exposure photo shows progressive shapes Nitinol takes while forming programmed word. Below: (left to right) In this series of photos, a technician connects a twisted strip of Nitinol, pre-formed to shape the word NITINOL, to a heat-producing battery. Soon, the word is re-formed.



METAL WITH A MEMORY

between the ends, the bone may knit, but not as well as it would had the ends been in complete contact. Here is where *Nitinol* might help. A piece of the material, its memory set to react to body temperature, is cooled to 50° F. and is fastened to the two halves of the bone across the gap. As the metal warms, its memory pulls the bone ends together correctly, something even the skilled hands of the surgeon may find difficult.

Medicine frequently has a need for a continuous monitoring of blood temperature to detect, for example, the beginning of a fever owing to infection after an operation. A piece of *Nitinol* can be set to straighten at a microscopic increase of temperature above standard body temperature, 98.6° F. Set into a meter-type frame, it can give either visual indication of temperature increase, or it can be used to make electrical contact to activate an alarm. The *Nitinol* would be activated by a probe reaching through skin to a vein or artery.

In setting up *Nitinol* for a specific task, the research scientist uses the desired "operating" temperature range as a basis for determining the percentage of each of the elements, nickel and titanium, making up the alloy. After melting the elements in a carbon crucible, the resultant *Nitinol* is cooled and formed into the shape needed. It is then heated to a temperature far higher than the proposed operating temperature to set the memory. For example, in the case of *Nitinol* for use in connection with body temperature, the temperature of boiling water (212° F.) is high enough to set the memory. After this heating, the *Nitinol* is then cooled to a temperature below the active temperature. At this point, the *Nitinol* may be deformed as much as is needed for the purpose intended. Upon being heated to the set "operating" temperature, the *Nitinol* will return to its original form, or will try, with useful stresses being created. It might be said that *Nitinol* warms up to its job.

Numerous uses for the alloy have already been developed in the aerospace industry. One continuing problem there has been the development of secure couplings for tubing in high pressure hydraulic systems in situations where stresses and vibration work to create failures in most standard type fittings. *Nitinol*, formed into a tube and with memory set at a size slightly smaller than the tubing it is to join, when brought to the operating temperature, will clamp such tubing so tightly that destructive testing will cause the tubing itself to fail before the *Nitinol* joint does. Rivets made of *Nitinol* will clamp metal skin elements of aircraft tightly and permanently with their memory creating continuing tension on the members. This results in continuing structural strength never before possible.

The discovery of *Nitinol* is one of those chance happenings in the field of research. The alloy had been developed and was being evaluated because of its extreme resistance to crystallization from flexing with resultant failure. At the time of discovery of the memory, a piece of wire made of *Nitinol* was being passed around a conference table in a management meeting at the Naval Ordnance Lab. It was being flexed, bent and twisted by the group of scientists in the meeting when it came into the hands of a pipe smoker. Examining the metal closely, the engineer got it close to the bowl of his pipe. The metal suddenly started to straighten itself. Further application of warmth from the pipe resulted in the wire returning to its original shape.

As the inventor left the meeting to return to his laboratory and find out what he had stumbled upon, he was heard to mutter, "Management meetings are not *always* bad!"

INTRODUCING:

WEAPON SYSTEMS FOR THE FLEET
nswc

Above is the new insignia for the Naval Surface Weapons Center.

On 1 Jul 1975 the Naval Ordnance Laboratory, White Oak, Md., and the Naval Weapons Laboratory, Dahlgren, Va., are scheduled to complete the reorganization plan combining them into a single command, the Naval Surface Weapons Center. Headquarters of the center is at its White Oak Laboratory in Maryland. This move will bring together more than 5500 people working in ordnance research and development, and should lead to more important discoveries for the Navy and useful spin-offs for the civilian community, such as *Nitinol*, described in the preceding article.

In recent years there have been numerous developments and discoveries which have been successfully adapted to civil needs. This "technology transfer," more commonly called spin-off, has helped in such areas as environmental pollution control, law enforcement, transportation, housing and health. Here are a few.

One recent example is the "Restrictive Manipulation Device" for combination locks, which was developed by NOL.

Combination locks provide a certain degree of security but any skilled locksmith can eventually figure out most combinations. This is no longer true. The new lock has a mechanism which allows only five attempts to get the right numbers. After five tries the mechanism automatically refuses to recognize any combination.

Fighting "Hot Box" Failures -- With NITINOL Sensors

Nitinol, the alloy of nickel and titanium that reacts strongly to heat, was developed by naval ordnance scientists for military applications. Its unique characteristic (see article on page 24) has made it very appropriate for use in a "self-powered temperature sensor."

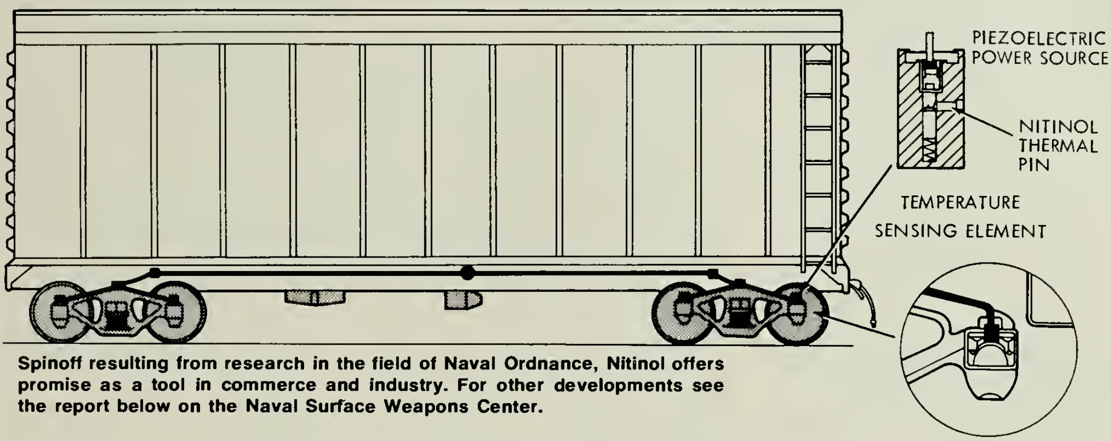
NSWC, White Oak Laboratory, working with the Federal Railroad Administration, has tested the feasibility of a *Nitinol* sensor system for preventing freight train derailments due to "hot box" failure on the cars. These failures, if not detected in time, may lead to disastrous pileups, and loss of life.

Effective "hot box" inspection must be at the point of incipient failure—that is, at each hot box on each railroad car—but the cost of automatic detectors prevents their being spaced closely enough to be able to catch some hot boxes before they cause axle failure and derailment.

With funding by the FRA, NSWC has come up with a self-powered thermal sensor believed to be rugged enough to withstand shock and vibration and do the job. In the NSWC concept, the alloy *Nitinol* is used as a pin in the sensor. When a bearing heats above a safe temperature, the *Nitinol* connection undergoes a sudden phase change, shrinks in length, and releases a spring-loaded firing pin. The firing pin initiates a series of reactions which activate the railroad car's air brake system, venting air from the brake line at a rate that automatically makes a normal brake application throughout the train.

This work is being taken one step further—from the feasibility study to an actual on-the-road test. Under a contract with the Federal Railroad Administration, NSWC will develop and install the system on a 124-car unit train operating out of Duluth, Minn.

Installation at this location will prove a real test for the system. Temperatures to −40° Fahrenheit are not uncommon in the winter and +90° temperatures are common in the summer. These temperatures, along with snow, sleet or rain, and dust, plus high operational miles, are ideal for testing.



Spinoff resulting from research in the field of Naval Ordnance, Nitinol offers promise as a tool in commerce and industry. For other developments see the report below on the Naval Surface Weapons Center.

Once it has been opened with the correct combination, the lock resets itself and gives the next user five more tries.

The device can also be placed in an all-lock condition so that it will not recognize any combination, even the correct one. Once this condition is set, the container can be entered only with explosives or brute force. The new lock should be useful to police forces, banks, stores with valuable merchandise, such as jewelry, or organizations needing increased lock security.

Another naval ordnance research spin-off is a fire-retardant intumescent paint system called "Insunol." Intumescence action is similar to Fourth of July "snakes," where the heat-induced swelling forms an insulating layer that retards the flow of heat. This type paint has been commercially available for some time but is unsuitable for the Navy's needs because of poor weathering properties.

Insunol is now being tested in civilian aircraft nacelle (engine housing) assemblies for DC-10s. The manufacturer's specifications called for a fire protection coating which would be lightweight, yet capable of protecting a thin aluminum panel from burn-through when exposed to a torch flame for 15 minutes. Some 225 nacelle assemblies have been coated with Insunol to date. The manufacturer reports the coating has had over 2000 flight hours and is holding up well.

Driving safety has also been enhanced by the Navy's research at its White Oak lab. In a study for the Department of Transportation, Federal Highway Administration, Navy scientists have been looking into the use of a laser technique to measure the textural characteristics of road surfaces. Pavement quality governs the tendency for an auto to skid, especially in wet weather; the wear on tires and suspension systems; and auto riding comfort, which affects driver fatigue.

To properly maintain safe and comfortable conditions on our nation's highways, a rapid and inexpensive instrument is needed which is capable of measuring large sections of surface without disrupting traffic. The NOL laser technique, which can be mounted and operated from a moving vehicle, appears to meet these requirements. It also has the advantage of lending itself to automatic data processing.

These are just a few examples of how naval ordnance research has benefited us all.

letters to the editor

BAQ/FSA

Sir: I am presently stationed aboard an AS. We are in an eight to 10-month overhaul period and are about 1200 miles from our home port. My wife, also in the Navy, is stationed at our home port. Being separated increases our expenses, but I am not eligible for BAQ or FSA for the following reasons:

- BAQ—My wife isn't classified as a dependent because she is in the Navy. Many of my shipmates' wives work and receive salaries and they are still eligible. My wife collects BAQ but only as an E-2.
- FSA—I don't qualify because I haven't four years' active service, although I meet the other requirements. I would move my wife here but her being in the Navy prevents it.

Am I eligible for any extra pay while we are here in the yards? How can I obtain more information about the subject?—EN3 J. P. L.

- *In dealing with your questions on BAQ and FSA, three sections of public law are involved. The first is Title 37, U. S. Code, Section 403, which prohibits the payment of BAQ to members without dependents on sea duty. The second is Sec. 427 of Title 37 which provides a FSA for members with dependents and in pay grade E-4 or above with more than four years' service. The third is Sec. 420 of Title 37, which states that "A member of the uniformed services may not be paid an increased allowance . . . on account of a dependent, for any period during which that dependent is entitled to a basic pay . . . Thus, you may not receive an increase in allowances on behalf of your wife. You are considered a member without dependents for entitlements purposes. Accordingly, you may not receive a BAQ while on sea duty or FSA while separated.*

The Navy has recognized the inequity facing members such as yourself and other members "without dependents" on sea duty. Attempts have been made to provide for payment in these cases, but the Comptroller General of the United States ruled the payment could not be made under the existing law.

The Navy does support a change to allow payment of a BAQ to members without dependents on sea duty and enactment of such a change would allow payment of BAQ at the "without dependents" rate to members in a similar situation. Upon resolution of the legislative proposal for a meaningful sea pay, the Navy expects to forward the BAQ for "bachelors" on sea duty proposal for consideration. A change in public law would also be required for payment of FSA.—Ed.

San Dunes on the Fantail

Sir: I know of a United States ship that sailed through a desert sandstorm. On Sunday morning, 23 Mar 1975, USS *Opportune* (ARS 41) entered the Suez Canal at Port Said, heading in a southerly direction en route to Ismailia, Egypt.

At 0930 the wind began to pick up and the skies grew dark; within half an hour *Opportune* was in the center of a sandstorm. Visibility dropped to zero. The Egyptian pilot advised the ship to heave to and anchor in the canal.

He said it was the worst sandstorm he had seen in his 17 years as a pilot on the canal. *Opportune* anchored until the sand storm was over, about 2000. The next day she arrived in Ismailia and the crew began to shovel the sand dunes off the fantail.

—PN1 E. S. Kaczynski, USN.

- *Can anyone top this?*—Ed.

Letter Designator

Sir: You've probably received a number of comments on the errors in the two answers relating to the firsts of Navy jets on page 51 of the January 75 issue, in which case you can add these to the collection.

The *Phantom I* aircraft was manufactured by the McDonnell Airplane Company of St. Louis, Mo., and in 1946/47 it had not yet merged with the Douglas Aircraft Company of Los Angeles, Calif. Therefore, the proper designator would have been XFH-1 and FH-1 respectively, since McDonnell's letter designator was "H", not "D" which is the Douglas symbol.

Thanks for the "Navy Buff" Q/A article. There were things there that even this buff didn't know. —AZ1 J. S. N.

- *We were happy to learn that you liked "For the Navy buff." To date your letter is the first to comment on the* Phantom I *letter designator—which attests to your alertness.*—Ed.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, Jefferson Davis Highway, Washington, D. C. 20360, four months in advance.

- *Squadrons VQ-1 & VQ-2*—A reunion is planned for 26 July at Cameron Station, Alexandria, Va. Contact CDR John E. Taylor, 5002 Woodland Way, Annandale, Va. 22003. Telephone 703-978-5862.
- USS *PC 565*—A 30th anniversary reunion of those who served aboard during WW II is planned for 1-2 August in New York City. Contact Mr. Exum L. Pike, 8 King Road, Middletown, R. I. 02840.
- USS *Amycus* (ARL 2)—The fourth annual reunion is planned for the weekend of 29 August in Seattle, Wash. Contact Mr. Walt Skinner, 1940 Lana Ave., N. E. #25, Salem, Ore. 97303.
- NAS *Ottumwa, Iowa*—A reunion is planned for veterans who served or trained at the station during WW II for 22-24 August on the station grounds. Contact Mrs. Pat Friedman, 609 Hill St., Highland Park, Ill. 60035.
- *LST 288*—The ninth reunion is planned for those who served in her during WW II for September 1975. Contact Mr. Stephen Sudyn, 2919 Amsdell Rd., Hamburg, N. Y. 14075.
- USS *Oklahoma* (BB 37)—San Diego reunion *dates changed*. New dates are 9-12 October. Brochures and programs on request from Mr. Omar Keller, 5003 Western Dr., RFD 4, Fremont, Neb. 68025.
- USS *Bates* (APD 47, originally DE 68)—Anyone interested in a 30-year reunion contact Mr. Charles Holden, RR 1, Box 307, Dunkirk, Md. 20754.
- USS *Stoddard* (DD 566)—A reunion is being considered for those who served in her between 1951 and 1954. Anyone interested contact Robert S. Albright, 53 E. Summit St., Mohnton, Pa. 19540 or James L. Hornberger, 119 Broad St., Salunga, Pa. 17538.

on the serious side

CTA1 Donald Winans

"Look out, enemies of the United States . . . here I come!"

AT2 Stephen Bridges

"So, whacha think of my stewed prune and split pea omelet?"

CDR Ted Biddison

"Tell headquarters—a little more reliability and a little less support."

YNCS Gerald Avera

"The 'when in doubt, fling it out' rule only applies to official mail—not my personal mail!"

HM2 Charles Hankinson

". . . I hear there is a shortage of Navy doctors . . ."

TAFFRAIL TALK

This year marks the 75th anniversary of the Navy's formal acceptance of its first submarine and the 20th anniversary of the nuclear-powered submarine. June 27, however, marked yet another important Navy submarine milestone. On that date, USS *Tigrone* (AGSS-419), the last World War II combat submarine on active duty, was decommissioned at Groton, Conn.

As *Trident*, the most sophisticated submarine in the world, prepares to join the fleet, *Tigrone* leaves the fleet with a distinguished World War II combat record. She represents accomplishments of the "silent service" during that period. Launched and commissioned in 1944, *Tigrone* conducted three World War II combat patrols and was among the ships present at Tokyo Bay on V-J Day 1945.

Since then, *Tigrone* has been a radar picket submarine and an auxiliary, providing services for other submarines, training submarine personnel and testing new acoustic systems.

* * *

Many of the Navy's most practical and ingenious devices and equipment are conceived by sailors trying to do a better job—or sometimes trying to get out of a job. A while back, Machinist's Mate 1st Class Thomas P. Failla did a better job and saved the Navy about $3000 when a running track for USS *America's* number three aircraft elevator door broke. Normally, a shipyard job requiring at least 30 man-days to complete, Failla accomplished the repair job with a $2.19 toy race car.

The section of broken track lay inaccessibly inside the huge steel door. Usually, a section of the door must be cut away and, in a complex operation with cables and pipes, the broken track is retrieved and replaced.

Failla, who was LPO of the ship's A Division hydraulics shop at the time, said, "I put my Yankee ingenuity to work and decided to run a toy car down the track inside the door." He said he figured such a small, wheeled-vehicle could tow a light line through the door and set up the first step of a possible alternate repair procedure.

After finding a toy auto of the right size at a local Norfolk store, Failla commenced rigging it for active naval service. "It was powered by two double-A batteries," he said, "and I taped the front end steering to keep the wheels aligned straight on the elevator track." He then removed the small toy driver's head and the racer's mock rear engine to allow for necessary clearance and towing.

Tying a shot line to the car, he released it on the track. To the cheers of the jubilant sailors on the project, the car successfully carried the line through the 39½ feet of the big door's interior. "Those at the other end were yelling 'I can hear it coming, it's coming' as it neared the end."

"All I had to do then," he said, "was tie the shot line delivered by the car to a one-half inch line and pull it through." The broken door track was then easily pulled out and a new one put in with the half-inch line while a few men held the door rollers up with crow bars. The job was complete.

According to Failla, the $2.19 repair vehicle is now looked in the hydraulics shop tools locker in case it is needed again.

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

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DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for approximately six naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.
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Right: Two young recruits take a break from training at Orlando, Fla., to visit nearby Disney World.

TODAY'S NAVY:

One Navy, United in Purpose, Striving for Common Goals

ALL HANDS

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AUGUST 1975 NUMBER 703

ADMIRAL JAMES L. HOLLOWAY III, USN
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ALL HANDS

MAGAZINE OF THE U. S. NAVY — 53rd YEAR OF PUBLICATION

FRONT AND BACK COVERS: An unusual sternside view of the Navy's oldest ship in commission, USS Constitution, with the modern Boston skyline in the background. It was painted by the artist John C. Roach, a Reserve ensign now on inactive duty.

AT LEFT: The Now Navy: Symbolic of the Navy's role on, over and under the seas are the following representatives of the fleet. Top: The nuclear aircraft carrier USS Enterprise (CVAN65); F-14As in flight. Second row: Commissioning ceremonies of USS L. Mendel Rivers (SSN686) with CGN37 in the background; the nuclear guided missile cruiser USS South Carolina (CGN37) and below left, the flags which spell out her name. Bottom right: USS Thomas Jefferson (SSBN618) underway at sea. —Photos by LTJG R. A. Anderson, PH1 Lumzer, PH2 R. G. Edmonson, PH2 E. L. Hawkins and PH1 Nixon.

INSIDE BACK COVER: Portrait at top was provided by the Newport (R. I.) Bicentennial Commission and is published here with their permission. It is claimed to be a portrayal of a young Black sailor in the American Revolution. The painting below is that of a sailor in the War of 1812.

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NAVY

Navies are born out of the spirit of independence and under the threat of war; they are nurtured into maturity by the urgent demands of defense, sharpened by the encounters of conflict. So it was with the first American Navy.

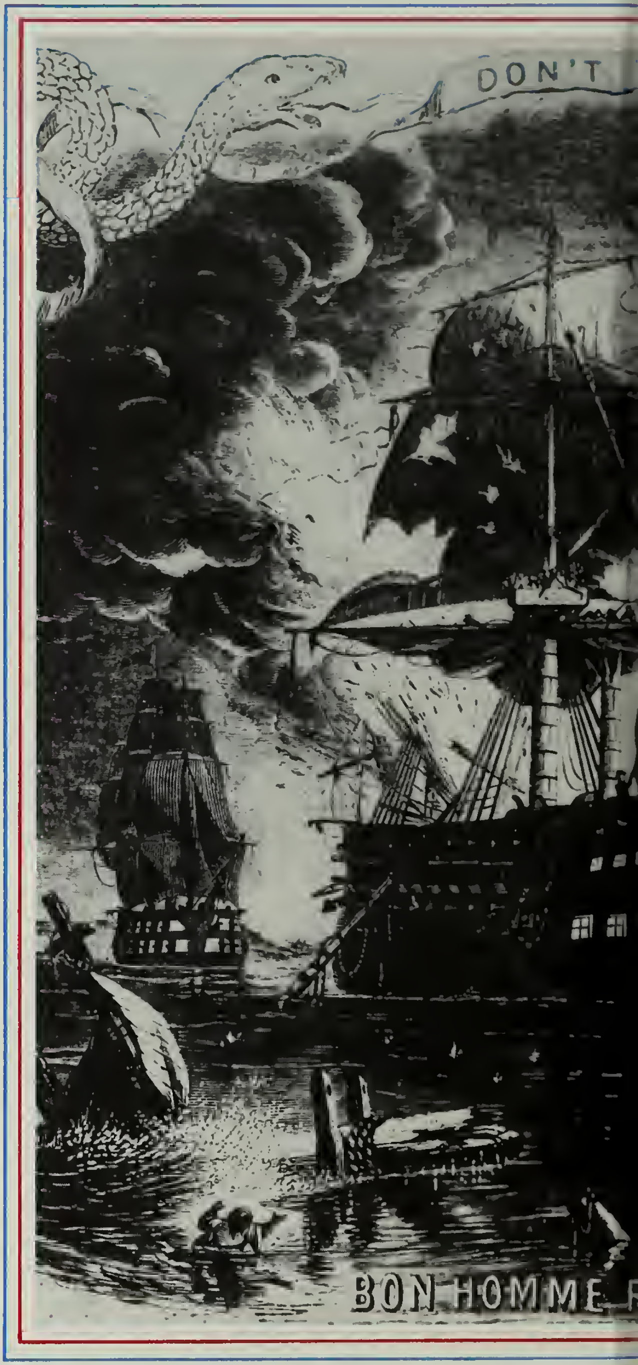
The American colonies were heavily dependent on the sea for their livelihood. All along the coast there were harbors and shipbuilding docks which offered livelihood to many, and provided sustenance to thousands more. It is not at all surprising that when the conflict between the Americans and the British began, it was these ports at which the British struck initially, and it was also from these ports that the Continental Congress and the States sought to send out ships of a tiny and hastily organized naval force to harass the mightiest seapower in the world as well as its merchant fleet. A major aim was to capture enemy supply and munitions vessels.

What was life like in that first Navy? From where did its ships and men come? How was it organized? And, importantly, what role did it play in building the proud tradition of the United States Navy today?

Like its beginnings, the Navy of the American Revolution was fragmented into many parts, each often acting independently of the others. The result for historians and those looking back on that era is confusing. For instance, several naval engagements between the Americans and the British actually occurred before the Continental Congress authorized a Navy. One in particular captures the spirit of independence and defiance of the citizens of those early days.

It happened on 12 Jun 1775 when a party of Maine woodsmen led by Jeremiah O'Brien, armed with pitchforks and axes, attacked the British schooner *Margaretta* off the coast of Machias, at that time a Massachusetts town, but now a part of Maine. The British schooner was the first Royal Navy vessel to strike her colors to the rebelling colonists' cause. Inspired by this success, the woodsmen set out in search of British merchant ships. They presaged the popularity and later success of the American privateers striking at British cargo vessels in the waters off the Atlantic coast.

Four months later the Congress first authorized a Naval Committee and then ordered the acquisition and fitting out of a number of ships. (It was a close vote because some of the members questioned the possibility of any success in taking on such a powerful enemy at sea.) Thus the American Navy had officially begun (as of 13 Oct 1775) but some time would elapse before it would have any significant effect on the mighty British Navy.



IN 1775

The first Naval Committee bought and fitted out one 24-gun ship, *Alfred*, plus the 20-gun *Columbus*, and two brigs, *Andrew Doria* and *Cabot*. These were ready for sea in December 1775 and by the end of the next month, the tiny Continental Navy had obtained sloops *Providence* and *Hornet* and the schooners *Wasp* and *Fly*.

This fleet, however, was actually pre-dated by the little-known group of ships that came to be called Washington's Navy. During the summer of 1775, General George Washington was concerned as he saw British ships sail supplies and munitions in and out of the Boston harbor untouched. He needed supplies and ammunition for his own troops to carry on his siege of the British in Boston. Using funds provided for his Army, General Washington painfully assembled a small fleet of eight vessels that might capture some of the supplies and ammunition for his army.

The schooner *Hannah*, first of "Washington's Navy," was in service in September 1775. Seven other ships followed: *Lynch*, *Franklin*, *Lee*, *Harrison*, *Warren*, *Washington* and *Hancock*.

Washington sent two of his ships to the mouth of the St. Lawrence River, hopefully to intercept two unarmed brigs from England carrying muskets and gunpowder to Quebec. The ships, instead, raided Charlottetown, St. John's (now Prince Edward Island), sacking the city and kidnapping a British official, the acting governor. They took a number of small merchant ships as prizes (some of which belonged to Colonial patriots, unfortunately).

Washington's Navy was short-lived. It had its difficulties, but it must have been an eye-opener to the British in Boston. It was also responsible for the capture of one significant plum, the British transport *Nancy*, which carried a large amount of sorely needed supplies in the form of guns and ammunition. *Nancy* was captured by the tiny ship *Lee* under Captain John Manley. Another ship which achieved a record in combat against great odds was *Franklin*, whose captain, James Mugford, was killed when his ship fought off raiders outnumbering *Franklin's* crew many times.

Washington, however, found that most of his captains tended to be too independent-minded about following orders, preferring their own prize targets, and their crews were, he said, "a disorderly set." Eventually, he released the ships of the so-called Washington's Navy.

The new navy which the Continental Congress had ordered to be established began to come into being in the last months of 1775. The first commander-in-chief was Esek Hopkins, who put to sea the first squadron of the Continental Navy on 18 Feb 1776. (Serving as first lieutenant, aboard the Navy's first flagship, *Alfred*, was John Paul Jones.)

Hopkins' squadron raided New Providence in the Bahamas, which was significant not as a big battle, but as the first amphibious operation carried out by the American Navymen and Marines. The forts surrendered a number of cannons and supplies, which was the objective of the operation. Hopkins did not prove to be as effective a commander as had been hoped. He went on to Rhode Island where the British pursued him up the Providence River. Although the British ship *Diamond* was grounded, Hopkins failed to take advantage of the situation and allowed her to get away. He had previously permitted another British ship to escape when he could have taken her, so it was not long after that Hopkins' command was withdrawn from him by Congress.

In its continuing efforts to build a fleet, Congress had authorized the construction of 13 brand-new frigates which were well under way. All were solidly constructed ships with a number of guns, but even so, pitted against the established and superior British force—then the finest navy in the world—they were at a serious disadvantage.

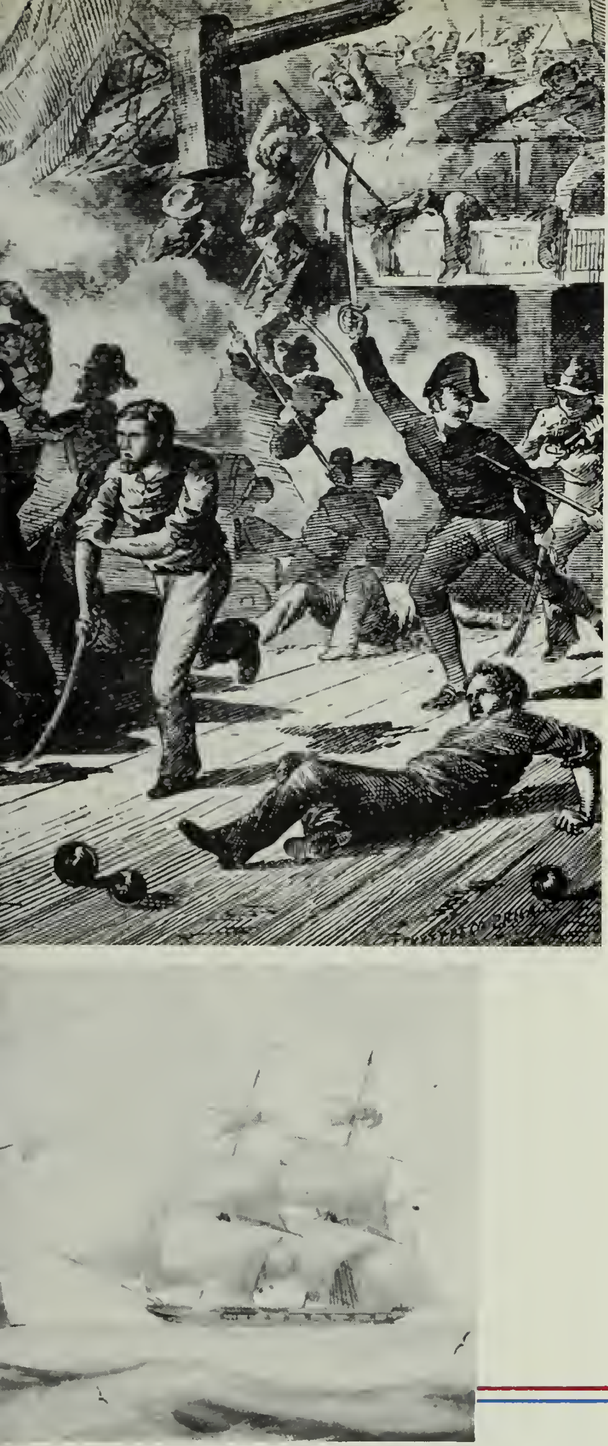
The first problem: Because of the British blockade of the American coast, it was difficult for the newly outfitted ships to reach the sea. Such was the case with *Montgomery* and *Congress*, ships of 28 and 24 guns, which were built at Poughkeepsie on the Hudson River. When the British occupied the port of New York, these ships were bottled up and to keep the enemy from capturing them, they had to be destroyed. Two more ships built in Philadelphia suffered a similar fate. Some of the others were also blockaded in their home ports, and one ship, *Trumbull*, was bottled up for three years because she could not clear the bar in the Connecticut River after she was completed.

The new frigates of the Continental Navy had their moments, however. *Hancock* and *Boston*, both built in Massachusetts, set out together in mid-1777 and captured two British brigs, then were involved in separate actions with the British warships *Somerset* and *Fox*. After escaping from *Somerset* on 30 May 1777 they met *Fox* and successfully captured her a week later. In further actions the two Continental ships were pursued by the powerful HMS *Rainbow*. Following a 39-hour pursuit, *Rainbow* bore down on *Hancock* and captured her while *Boston* escaped. *Boston* continued to serve valiantly, in various actions, over a period of some three years. Her last action was in the defense of the Charleston, S. C., harbor where she was captured by the British in May 1780.

Hancock, after her capture by the British, went on to serve in the Revolution, but on the enemy's side. By a twist of fate, it was *Hancock* (renamed *Iris*) that captured a sister frigate, *Trumbull*, one of the original 13 frigates built for the Continental Navy. (The British crew were said to have called the American-built ship one of the finest frigates in which they sailed.)

Among the names associated with this new made-in-America fleet of frigates is that of John Barry who courageously commanded many ships, John Manley (who had captured *Nancy* while in Washington's Navy) and Abraham Whipple.

Skipper of *Providence*, Whipple, was a member of a three-ship force which found itself on the edge of a huge enemy convoy, heavily guarded, during a fog off Newfoundland. Sending armed boarding parties to the merchant ships, the Americans managed to take 11 ships as prizes, without being detected by the ships



Top: The fighting was fast and furious to ward off boarding parties. Above: A British frigate pursues an American schooner. Note slogan on pennant: "Catch me who can."

protecting the convoy. Cargoes and captured ships worth over a million dollars were dispatched back to the States.

There was still another facet to the Continental Navy. Ben Franklin, recognizing the importance of seapower as did George Washington, also sponsored a naval force that he could claim as his own. He also outfitted privateers in France. They have been labeled by some as Franklin's Navy. Working on the diplomatic front in Paris, the wily old inventor-postmaster-publisher began a begging-and-borrowing campaign—and the ships, funds, and—probably of greater importance—the interest that he helped to promote were of great value to the new nation as well as its infant Navy.

One of Franklin's aims was to disrupt British home-front shipping which would serve to demoralize the British people. He also wanted some British prisoners to exchange for American prisoners in English jails. In addition, he hoped elements of the British fleet would be forced back home to defend their own waters, thus relieving the former colonies of some of the blockade pressure. Finally, he wanted to encourage France to enter the war by some visible American successes at sea. His strategy worked on almost every count.

Among the most daring commanders bringing the war to British waters was John Paul Jones. (For more on this naval hero, check the section on significant events in naval history.) As skipper of *Ranger* he departed from France on 10 Apr 1778 for raids against the British. After capturing a number of ships he actually landed on British soil, raiding Whitehaven, in an attempt to capture the Earl of Selkirk. Some months later he took command of an old French ship (that had seen better days) which he named *Bonhomme Richard*, after Franklin's almanac character. She carried 42 relatively light guns, some in doubtful condition. Jones headed for the coast of Ireland, taking more prizes and destroying others.

On 23 Sep 1779, Jones encountered the British warship *Serapis* (with 50 guns) and a furious battle ensued, near the headland of Flamborough Head. As Jones wrote later, "Every method was practiced on both sides to gain an advantage, and rake each other; and I must confess that the enemy's ship, being more manageable than *Bonhomme Richard*, gained thereby several times an advantageous situation, in spite of my best endeavors to prevent it."

The two ships, lashed together with grappling hooks so neither could escape, pounded away at one another, and *Bonhomme Richard* began taking the worst of the beating. Her hold was filling with water and she was on fire in several places. According to one story, a gunner in a state of panic was about to strike the colors when Jones hurled his pistol at him, striking him down. The battle continued to be fought furiously with the outcome uncertain until the end (for more details see page 17).

Jones' situation was not helped by the gunfire from the accompanying American-built ship *Alliance*, commanded by a Frenchman, Pierre Landais, who showed up at the battle scene about this time and started firing indiscriminately at both ships, holing *Bonhomme Richard* still more. Jones pleaded with him to stop, but was not heeded.

What turned the tide of victory for Jones was his forces aloft. Armed with muskets and dexterously climbing along the interlaced rigging of the two ships, these men kept the deck of *Serapis* clear by shooting and dropping chains and other material down on the enemy. A member of Jones' crew climbed to the *Serapis* maintop and managed to drop a hand grenade which ignited the powder and scattered cartridges on the gundeck.

In the man-to-man sea battle, the British were forced to surrender and the battle of *Bonhomme Richard* versus *Serapis* went down as one of the great naval battles in history.

Still, the paths of history are not all that direct or as simple: there were state navies, for example, and the aforementioned privateers.

Turning back to the early years of the war, the states—without waiting for the Continental Congress to act—had begun outfitting their own navies. Rhode Island was the first—commissioning two armed sloops to put into Narragansett Bay and harass HMS *Rose*. While the sloops couldn't directly challenge *Rose*, of course, they did destroy one of her tenders and served as a harassment function against the landing of troops ashore.

The Massachusetts Navy may be considered to have begun unofficially with the armed band from Machias, described earlier. The first legislation to create a Massachusetts State Navy came in December 1775. The prizes captured were turned over to the Massachusetts Committee of Safety, a pro-independence group, which saw the value of an armed fleet. At its peak the Bay State Navy had 15 seagoing vessels and a galley, taking on mostly hit-and-run missions.

In South Carolina, where a main objective was to protect the Charleston harbor, the state put one of the most potent state navies into the water. Operating along with Georgia, South Carolina took as prizes several British merchantmen carrying priceless gunpowder. Virginia and Maryland put small fleets into Chesapeake Bay to protect shipping there, as did Pennsylvania in the Delaware River. None of these fleets could directly challenge the British warships, but they did afford some opposition to the smaller ships which the British operated in American waters, and more importantly, they challenged the free flow of troops and supplies by water.

By the time the war was over, the official Continental Navy had some 56 different vessels at one time or another, although it only managed to reach a peak of 27 ships, averaging 20 guns, operating at the same time. They captured a total of 196 enemy transports and warships, with an estimated worth of more than $6 million. The Continental Navy itself never numbered more than 3000 men at any one time, with a total of 123 officers. This tiny Continental Navy, hurriedly assembled when the colonies declared their independence, served not only to inflict damage on the proud ships of the Royal Navy, but also it lifted American morale with each of its victories. John Paul Jones, Gustavus Conyngham and Lambert Wickes were among those who brought the battle to the British on their own waters. (Conyngham had a captain's commission in the Continental Navy. He was also a privateer; see below. In a period of 18 months, he took some 60 prizes, becoming a terror to British shipping.) The news of daring raids and victorious battles at sea were acclaimed in the 13 youthful United States.

While the effectiveness of the Continental Navy itself was limited by its small size, there was another aspect of the naval war on the high seas, the previously mentioned privateering which played an important part in the ultimate victory over the British. On 2 Mar 1776, Congress gave authorization for the commissioning of private ships—privateers—to attack British merchant ships. The privateers multiplied rapidly because their

eft: John Paul Jones. Above: Joshua Barney, nicknamed the 'Prince of Privateers." Below: First salute to Stars and Stripes s shown in painting as a French ship returns salute to Ranger ntering Quiberon Bay, 1778.

captains and crews could share a very sizable portion of the prizes they captured.

From the standpoint of harassment to British shipping over lengthy sea-lanes, a vital role was performed by American privateers. Men from all walks of life signed up in these ships. Vessels of all types were converted for the purpose initially, and later were specially built to do their job. They were fast and reasonably well armed. Private financing to arm and fit them out was needed, but that was rarely a problem; a share in a privateer could mean a fortune almost overnight.

Privateers were effective because most British merchantmen cruised the seas unarmed or lightly armed. Therefore, any vessel which did have guns and could run an unprotected merchantman down was almost certain to have that ship at its mercy. Most merchantmen were incredibly slow because of their design and the heavy cargo loads they carried.

The British Navy began a system of convoys to protect its merchant shipping, but it was far from foolproof. The moment a merchantman dropped behind, she was in immediate danger, because a warship couldn't leave the convoy to protect just one ship. Then, too, convoys could protect only so many ships.

One of the most famous privateers was Jonathan Haraden of Salem, Mass., commanding the 16-gun *General Pickering.* Haraden once met a larger British ship and persuaded her crew to surrender by telling them his was an American frigate of the largest class. Another famous privateer, Joshua Barney, was called the "Prince of the Privateers" (he was also a commissioned officer of the Continental Navy). Barney met the British in a number of engagements and was once captured, but he escaped with the help of Benjamin Franklin. (Barney, like Haraden, lived to a ripe old age and gained further fame during the War of 1812 as a Navy captain seeing action in the Chesapeake.)

It is estimated that Congress issued more than 1600 commissions for privateers during the period of the Revolutionary War. The privateers operated not only along the American coastlines, but also some ventured far out into the Atlantic and even into the English Channel and the Irish Sea.

According to one reasonable estimate, the British were said to have lost some 2000 merchant ships, manned by crews totaling 16,000 to the American privateers. The merchant ships captured as prizes would be manned by prize crews from the privateer and sailed to a friendly port where the ships and cargo would be sold.

John Adams, later to become President of the United States, and an early proponent of the Navy, lauded the role of the privateers in cutting off supplies to the British.

There remains one more aspect of the naval war—that of the Allied Navy of France. The 13 United States had signed an alliance with the French in 1778. French naval forces under Admiral D'Estaing appeared immediately off the American coast; however it was the Battle off the Virginia Capes that was the most important French naval operation. This was at Yorktown, in 1781, where a combined land and sea effort was able to defeat the British. With Washington leading the land forces against Cornwallis, Comte de Grasse commanded a fleet to cut off Cornwallis' retreat or any British efforts to send in reinforcements. Although a peace treaty officially ending the Revolution was not signed in Paris until 3 Sep 1783, the tide had turned—and seapower had demonstrated its importance in that victory.

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200 YEARS of NAVY JOBS

Most people think of ships when they think of the Navy, but more realistically, the Navy is people. Its job is accomplished through the effective use of people.

Today, many men are experts in some area when they enter the Navy. The majority, however, have only a general background, plus an ability to learn. They are trained in schools and on the job, then join ranks in special occupational fields.

Organization is attained when all the various skills needed to operate the Navy are tied together in the enlisted rating structure. This system has evolved, as most other aspects of the Navy, more by the natural trend of events than by a planned development. Its history is as colorful as a rainbow of signal flags during full dress ship on the Fourth of July, but few modern Navymen are aware of the jobs performed by their predecessors.

Landsman, for example, means nothing to most sailors today, though it was a fairly recent rating in the Navy; it was disestablished in 1921. By that time the Navy had long since phased out all of its bag room keepers, jacks-o'-the-dust, lamplighters and captains of the forecastle, afterguard, foretop, maintop and mizzentop.

That's not to say, of course, that a landsman didn't belong to the old Navy, and with all due respects to our saltier members, we mean the OLD Navy—which is now at the two-century mark.

But what about loblolly boys, coopers, quarter gunners and yeomen of the gunroom? Theirs was the Navy of Stephen Decatur, John Barry, Thomas Truxtun, Edward Preble and William Bainbridge; of 12-gun schooners like *Enterprise* and 36-gun ships like *Constellation*.

In those days (in the first decade of the 1800s) a British squadron was liable to stop American ships at sea and impress crewmembers into the Royal Navy. Or these same men might have had the experience of earning a share of the prize money from a captured

privateer. With probably less than $15 a month in basic pay, they could well use it. An organized rating structure, especially pay grades with periodic pay increases, was still in the far distant future.

Actually, the first feeble steps toward a rating structure had been taken in 1775 with the publication of Rules for the Regulation of the Navy of the United Colonies. This mentions the surgeon's mate, cook, armorer, gunsmith, master-at-arms and sailmaker. It also requires the captain to take care when any officers or volunteer seamen are turned over to his ship, not to rate them on the ship's books in a worse quality or lower degree or station than they served in their previous ship.

The jobs of Navymen have changed considerably since those days, when tars manned the sails and captains of the top bawled orders to the men aloft. It was an era when apprenticeships were served by most workers, and those seeking a career at sea were no exception.

Many sailors who joined up in this period might have started out as "boys." They might have entered the Navy at a "rendezvous center"—a public house or inn rented as a temporary recruiting station—or they might just as easily have been recruited by the captain of the ship in which they sailed.

Enlistments were for only one—later two—years at a time, or for the length of a cruise. Career opportunities for enlisted men, such as were available to commissioned officers at the time, were in the distant future.

Fresh recruits were brought on board, took a bath and were given a haircut. If after having been afloat for a time they were considered potential officer material, they might be designated midshipmen—usually before reaching their 20th birthday. This was very rare, however; midshipmen normally came on board as approved midshipmen. The crew slept in hammocks and lived mainly on salt pork and beef, supplemented by fresh fish caught from the ship by a detail assigned for that purpose.

For their efforts, boys of the early 19th century received a wage of $10.50 a month, plus a daily ration. The Navy, in return, guaranteed them the elements of an education and taught them how to be sailors. First they were taught the principal parts of a ship and the names and uses of all sails, spars and rigging; then some lessons in bending, unbending, reefing and furling sails and the handling of yards and spars were in order.

Graduating from the elementary to the practical level, the boys learned to be good oarsmen, became familiar with the compass, lead and helm, then learned how to be "moderately skillful and much comprehended under the head of marlinspike seamanship," as contemporary regulations stated.

From six to 12 boys from each crew were selected for signal training. They all learned gunnery and were given small arms drill and cutlass exercises.

If deserving of the privilege, having studied hard and kept themselves out of trouble, they could ask to go ashore one afternoon a week, in addition to Sunday

Facing page: One of a young recruit's first lessons aboard ship was in sail handling. Above: Painting depicts powder boy who served with John Paul Jones. Left: The ship's carpenter was responsible for frame and all wooden structures of the ship.

afternoon, which seems to have been free time for most who behaved themselves.

Navy boys usually grew up to be regular Navymen, earning what we would now call a rating. Seasoned Navymen in the sailing days formed the corps of supervisors who told inexperienced sailors what to do and when to do it. These inexperienced men were the landsmen, and they formed a large part of the seagoing service.

Landsmen were erstwhile civilians taken on board without training. Some of the jobs they performed could be done as readily in a ship as ashore. Many of them were tailors, cobblers, barbers and the like, who were also required to learn seamanship.

Some rated Navymen in the sailing days were considered officers of a sort. They were the forerunners of our present chief petty officers and warrant officers.

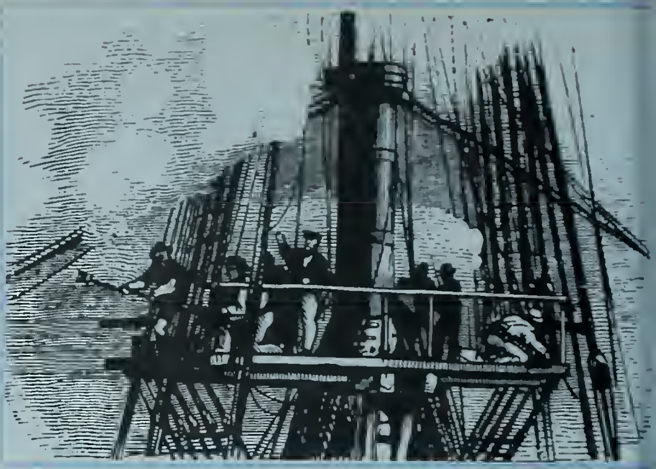
Several categories were referred to as being "civil officers." These included chaplains and surgeons, who remained in the officer ranks.

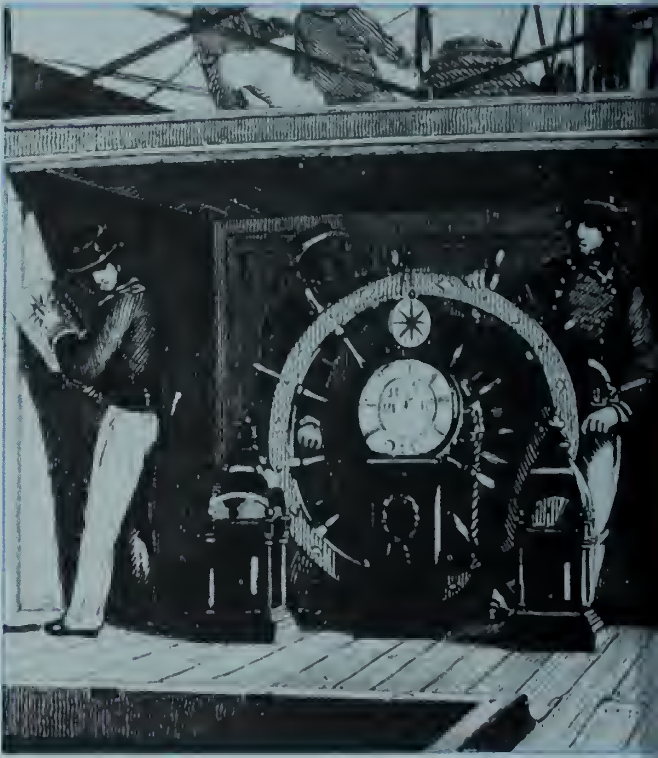
Another was the purser, listed as a noncombatant civil officer. He was appointed by warrant. Although his pay was trifling, he usually had the coziest quarters and his negotiations often brought him an income which could exceed that of the captain.

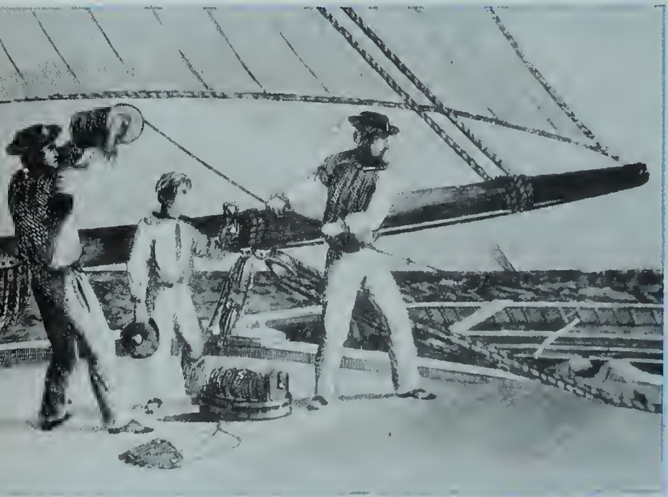
The purser was responsible for supplying the ship with provisions. He was assisted by the purser's steward, usually called "jack of the bread room," which later became "jack-o'-the-dust." Coopers (who made buckets and barrels) were also assigned to this duty at times.

The purser kept the small stores on board ship and was authorized to sell slops (clothing), tobacco and other small items sailors needed in those days, such as tin pots, spoons, pepper, mustard, knives, needles and thread. Before 1809 his profits were unlimited; after that date he was limited by law to a 50 per cent profit on tea, sugar and tobacco, 10 per cent on "slops," and 25 per cent on all other articles. If he couldn't prove to the skipper's satisfaction that he received only legal profit, no profit was allowed.

The early boatswain was appointed by warrant and







was among the more important men on board ship. He was usually a grizzled old salt who wasn't timid about giving orders and it never occurred to him that they wouldn't be obeyed. He was assisted by his mates and, though it is unlikely that he was unrecognizable in other respects, he nevertheless carried a silver bos'n's pipe and rattan cane that identified his position.

His pipe was the sailing ship's PA system. It could be heard 120 feet up in the rigging and in the deepest and darkest hold. His cane was an instrument of persuasion which, it was said, "cured more scurvy than the doctor, made cripples take up their beds and walk, and made the lame skip and run up the shrouds like monkeys."

The boatswain and boatswain's mates examined rigging, anchors, booms and boats and saw that the crew was not wasteful. In addition to supervising the deck crew, the boatswain was responsible for administering severe punishment such as lashings with the cat-o-nine-tails. This job was later given to the boatswain's mates, and subsequently abolished in the Navy as cruel and unusual punishment.

A boatswain had, in addition to his mates, a yeoman, a petty officer who accounted for the department's equipment, a rope maker (usually an experienced able-bodied seaman), and a cockswain who was in charge of boat handling. The cockswain drew his name from the cock (cog), a small boat aboard ship.

Another of the boatswain's men was the sailmaker, who was prominent in his own right. He had charge of and was responsible for the hundreds of yards of canvas which caught the power for his ship.

The sailmaker found and repaired defects in the sails, tallied and stored them, and kept a watchful eye to ensure that they didn't become waterlogged or that vermin didn't eat holes in them. He was responsible for all other canvas on the ship as well, including hatch covers, screens, chutes, hammocks and clothing bags.

The ship's carpenter, also appointed by warrant, supervised a group of shipwrights (shipworkers) who were kept on board to repair the frame structure and all wooden structural members. Also working for the carpenter were other craftsmen who tended to the general upkeep of the vessel and repaired it during and after battle. When seams split, for example, they were caulked with pitch by the caulker.

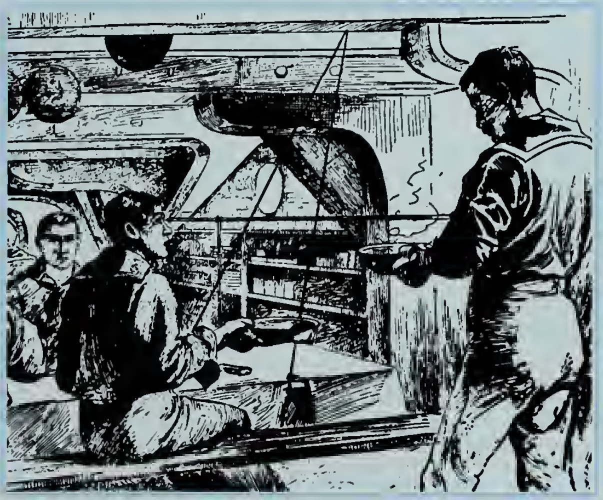
The carpenter went aloft every day to inspect the masts and yards. If they were sprung or otherwise defective, a repair party would turn to. He examined lower deck ports for proper alignment, and made sure the ship's pumps, boats, ladders and gratings were all in good repair.

An interesting case in the origin of a rating is hospital corpsman. Early day surgeons were assisted by the surgeon's mate. He was a medical man and, like the surgeon, was considered a noncombatant civil officer. He was a combination yeoman, corpsman and leading chief.

The surgeon's mate kept a journal of diseases and treatment, weighed and accounted for every article of medicine, dressed wounds and ulcers and performed bloodlettings. He also supervised the loblolly boys.

The loblolly boy is first referred to in the American Revolution. This rating then appears in records of the

Facing page left: Sailors pay out log to figure speed of vessel. Facing page top to bottom: Rigging and masts had to be inspected daily aboard a sailing ship. Holystoning and cleaning wooden decks. Early quartermaster at the wheel. Left top: Each sailor was his own tailor. Left bottom: The sailmaker was responsible not only for the sails but also for all other canvas on the ship (plus his own mending). This included hatch covers, hammocks and clothing bags. Below: Sailors of late 19th century at mess.



1798 muster roll of USS *Constellation*. Loblolly was a thick gruel, thus explaining how the boy who served it to patients derived this unusual appellation. The term also was nautical slang for medicine.

As the requirements of his job expanded, the corpsman's predecessor took on increased importance in the Navy. In 1839 the surgeon's steward rating was established, in turn becoming apothecary (1866). Navy Regs of 1870 refers to the rating as bayman (probably from sickbay-man), and in 1898 it became hospital steward. In 1917, hospital steward became pharmacist's mate which, in 1948, became the present-day hospital corpsman.

Not all ratings have similar histories because most of today's specialties resulted from later technical developments in the Navy. Besides, there were other considerations affecting the development of a formal rating structure.

War with the Barbary pirates taught the Navy that little success was to be found in recruiting seamen for limited periods or for the duration of one cruise. If a man was scheduled for discharge before his ship was ready to return he had to be transferred to a ship leaving the Mediterranean. The operations in the Med were to continue through four summers—a reflection of the Navy's determination to accomplish the job at hand. Needless to say, a war being carried on so far from American shores was a difficult one and brought added hardship to the life of a crewmember.

Following settlement of the Barbary pirate menace, the period of the gunboat Navy emerged, during which consideration was given principally to defending our shores and harbors.

Continuing harassment of our merchant fleet by the British, however, resulted in the War of 1812. With more victories at sea than on land in this conflict, the U. S. Navy was brought into public favor, and the country assumed a growing awareness that a navy was always necessary for its protection.

This might be considered a turning point that contributed greatly toward development of a more permanent

enlisted rating structure. By 1870 there were some 30 ratings in existence, including several still in use today. Subsequently, in 1885, the first system of "job families" of the type we know today had been devised for enlisted members.

Also, the Navy had transformed itself from sail to steam, from wooden ships to ironclads. Some jobs required more training. New ratings were established as new skills were needed, then were superseded or augmented by even more advanced skills.

But the transition was not always smooth, nor were the new jobs necessarily easier than rigging shrouds to the mainmast. With the advent of steam, for instance, the Navy employed coal passers who had the job of feeding fires day and night.

Though jobs changed, the Navy's standards remained demanding. How do you think you'd qualify for the following? It's taken from the Regulations for the Navy, 1870, as amended in 1874, and it points up the whole field of enlisted training to qualify for advancement up the ladder to the warrant category of gunner.

"A candidate for the appointment of acting gunner must be a seaman of sober and correct habits, must be not less than 21 nor more than 35 years of age, and must, previous to the professional examination, pass the required physical examination.

"He must understand the manner of fitting magazines, shell-rooms, shell-houses, and lightrooms; the manner of stowing and preserving powder, projectiles, fireworks and all ordnance stores afloat and ashore; the manner of handling and securing guns.

"He must be able to put up all kinds of ammunition, to take impressions of vent and bore, to star-gauge guns, to adjust, verify and use sights, and to fit all gun-gear.

"He must thoroughly understand and be able to explain all fuses in use in the Navy.

"He must be fully conversant with all orders and regulations in regard to the care and handling of ordnance material and stores afloat and ashore, and with the charges of powder for guns and projectiles of every caliber.

"He must be able to read and write with facility; must understand the first four rules of arithmetic and proportion; must be able to keep the gunner's accounts correctly, and must have made a cruise in a seagoing vessel of war. . . .

"No acting gunner shall receive a warrant as gunner until after making a cruise of not less than one year, as acting gunner, in a seagoing vessel of war, and after a course of laboratory instruction at the Washington Navy Yard, he shall have passed a thorough examination before a duly authorized Board of Line Officers, and no acting gunner shall be so examined unless he shall present commendatory letters from his commanding officer."

One of the growing pains of the 19th century Navy had to face, especially in the periods between wars, was that of training men of many different nationalities who did not speak or understand English. In 1872, Commodore Stephen B. Luce, referred to as the father

Facing page left: Time for a haircut aboard USS Atlanta, about 1887. Facing page top: Civil War gun crew aboard gunboat Mendota. Facing page bottom: Navy men enjoy a pipeful of tobacco. Note: "Smoking lamp is lit." Left top: Crew of Navy ship of Civil War era. Left bottom: When coal went, so did coal passer or heaver rating. Below: Pigeon handler.

NAVY JOBS

of our naval training system, wrote Secretary of the Navy G. M. Robeson:

"Our ships go to sea manned by heterogeneous crews representing nearly every country on the face of the globe," he said. The commodore went on to point out that 35 countries were represented in five U. S. Navy ships in the Mediterranean and that less than half of all crewmen were U. S. citizens. (As late as the 1890s, so one story goes, there is said to have been a U. S. gunboat in Chinese waters that had only one American enlisted crewmember out of 135.)

The Spanish-American War saw the U. S. Navy emerge among the nations of the world as a seapower, and the Great White Fleet in the first decade of the twentieth century was a visual demonstration of that power.

And as the Navy grew, so did Navy jobs. But the ratings were not quick to change.

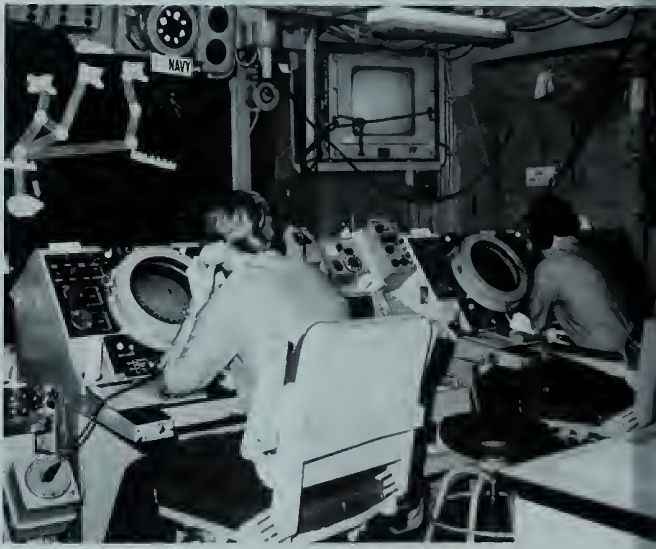
The rating structure has passed through various stages of refinement since it was adopted in its present form. In 1886, a scale of pay grades extending from third class seaman to first class petty officer had been adopted. Enlisted men were grouped into three general classes according to the type of work done: seaman, special and artificer.

The next major alterations to the system, disregarding gradual changes, were posted in the early 1920s when many of our first aviation ratings were adopted. It was then that aviation riggers joined their seagoing shipmates, along with aviation carpenter's mates and aviation machinist's mates.

By the beginning of World War II, the rating structure was becoming inadequate to the problem of distributing the best-qualified men to critical billets. A major adjustment was needed to meet technological advances. A whole new group of ratings arrived with WW II—under the general heading of Seabees.

As an interim measure, existing ratings were subdivided to identify special skills. Radioman, for example,

Below: Today's Navy—flight deck action. Right from top to bottom: Computer systems are used widely throughout the fleet. Jobs, once thought for men only, are now performed by women also. A quartermaster calculates gunner's accuracy by triangulating shell splashes from negatives taken of firing ship and towing vessel. Helicopter direction control room aboard USS Guadalcanal (LPH 7). Facing page top: Underwater demolition team member. Facing page bottom: An aviation antisubmarine warfare technician (AX) checks control panel.



was split into radioman and radio technician. Later some radio technicians were transferred to the new sonarman rating. In turn, this rating was later split to include "sonarman harbor defense specialty."

The specialist ratings were established, and the famous Specialist (X) rating of WW II eventually became the catchall for jobs which could not be fitted elsewhere into the rating structure.

There was the Specialist (P)(VM) for V-Mail, the Specialist (P)(MP)—that was for Motion Picture Production and the Specialist (X)(KP) for Key Punch Operator. Does anyone remember those Specialists (X) who were pigeon trainers? They were called pigeoneers and their rating had the abbreviation SPX(PI). (Appropriately, pigeons were assigned to the aviation branch of the Navy.)

Before WW II, there were 30-odd ratings. By V-J Day, they had given way to nearly 200 wartime categories. Then in September 1945, the Navy launched studies directed toward finding a classification system which would serve both peacetime and wartime needs. The resulting rate, rating and warrant structure, implemented by the then new Manual of Qualifications for Advancement in Rating, went into effect 2 Apr 1948. It was the product of intensive research by Navy personnel experts, aided by seven petty officers with wide experience in the ratings themselves, of numerous conferences with representatives of the Navy bureaus and offices concerned with particular rating categories and, finally, based on recommendations submitted by Fleet and training commands.

The past two decades have seen some new ratings join the others, indicating technological advances. For example: Electronic Warfare Technician, Data Systems Technician, Missile Technician, Ocean Systems Technician. But in each case a need had to be strongly demonstrated before the change was made.

Today, the rating structure is divided into 11 groups, each of which reflects similarities of the ratings, shipboard organization and bureau affiliations. An example of the latter is the construction ratings, Group VIII, which have many dealings with the Naval Facilities Engineering Command. The groups include: Group I (Deck), Group II (Ordnance), Group III (Electronics), Group IV (Precision equipment), Group V (Administrative and Clerical), Group VI (Miscellaneous), Group VII (Engineering and Hull), Group VIII (Construction), Group IX(Aviation), Group X (Medical), and Group XI (Dental).

In the Navy today there are six general apprenticeship ratings (seaman, fireman, constructionman, airman, hospitalman, and dentalman) and 72 general rating categories augmented by 20 service ratings. That sounds like a lot and the Navy is now at work to revise, consolidate and improve its classification system.

Earlier it was said that the rating structure is a product of evolution. It is also a product of modern management. The latter is the key to enlisted career development and serves as a basis for training programs, detailing, advancement and simply putting to the best use the talents of thousands of Navy people.

At the present time the Navy Enlisted Occupational System, known as NEOCS, is undergoing a review as a result of recommendations made by the Freeman Board. The planning for the implementation of the study changes is already underway, and will make significant improvements in the Navy's classification system. For more on this, see the ALL HANDS issues of December 1974 (page 5) and March 1975 (page 50).

Many Navy people today take pride in the fact that they can trace their ratings back a century or more. Others are happy to know their skills are as new as the age in which we live. But it is the combination of these skills, old and new, that keeps the Navy afloat. Without them, ships couldn't sail, airplanes couldn't fly and equipment couldn't function. Such is the contribution of each and every Navy person.

—JO1 Ken Testorff

SIGNIFICANT EVENTS

The following article is a brief summary of selected highlights of 200 years of U. S. Naval history. Because of limited space, many other important or significant events have been eliminated or mentioned in a few words. For a more complete outline of naval history, see the chronological series that has been published periodically in ALL HANDS*:* The Early Navy and The Birth of the Nation, 1775-1855, *Part I, January 1973;* 1856-1913, *Part II, July 1973;* The Emerging Era of the Modern Navy, 1913-1941, *Part III, October 1973;* World War II, 1941-1945, *Part IV, July 1974;* The Cold War Years and the Emergence of the Electronic, Nuclear, Supersonic Navy, 1946-1959, *Part V, March 1975.*

One more increment of the chronology will appear in a forthcoming issue; it will cover the years from 1960 to the present, as the U. S. Navy enters its third century—on, over, and under the seas.

From sailing ships to nuclear submarines, from biplanes to lunar modules—the U. S. Navy has been in on it all. In 200 years, the Navy has done too many things to cover them all in one issue, but at least some of the more notable and significant events deserve special mention in our bicentennial year.

A Navy Is Born

At the outbreak of the Revolutionary War there was no American Navy. Colonists had to begin their war at sea against the British with private ships manned by merchant seamen, farmers, soldiers and backwoodsmen. On 13 Oct 1775, the Second Continental Congress met at Philadelphia and changed this when they approved the acquisition and fitting out of two naval vessels. The United States Navy was born.

For a capsule history of the Navy in the Revolu-

IN NAVAL HISTORY

tion—the years 1775 to 1783—see the article on pages 2 to 7. The importance of the war at sea is pointed up by the fact that the antagonists were separated by 3000 miles of ocean. And it is significant that the battle which ultimately convinced the British that the war was lost was at Yorktown when Cornwallis surrendered to Washington and Rochambeau. Here was a classic case of a general facing the opposing forces of the enemy—confronting him on land while his back was to the water with an unfriendly fleet cutting off any probability of retreat. That was the fleet of America's ally, France, led by Admiral Comte de Grasse. An American destroyer, the second U. S. Navy ship to be named in his honor, will be launched in 1976 during America's Bicentennial Celebration.

One symbolic event in which the tiny new Navy played a significant role is appropriate to mention here—that was the first official recognition by a foreign nation of the American "Stars and Stripes" flag. On 14 Feb 1778, John Paul Jones sailed into Quiberon Bay, France, in *Ranger* and saluted the French fleet anchored there. A nine-gun salute was given in return. A gun salute given to a revolutionary government was a significant signal of the country's recognition. France, therefore, became one of the first foreign powers to recognize the struggling government of the American colonies. It was not the first—that claim belongs to the Dutch, who had given recognition to an American flag (not the Stars and Stripes) at St. Eustatius, an island in the West Indies belonging to Holland, in 1776.

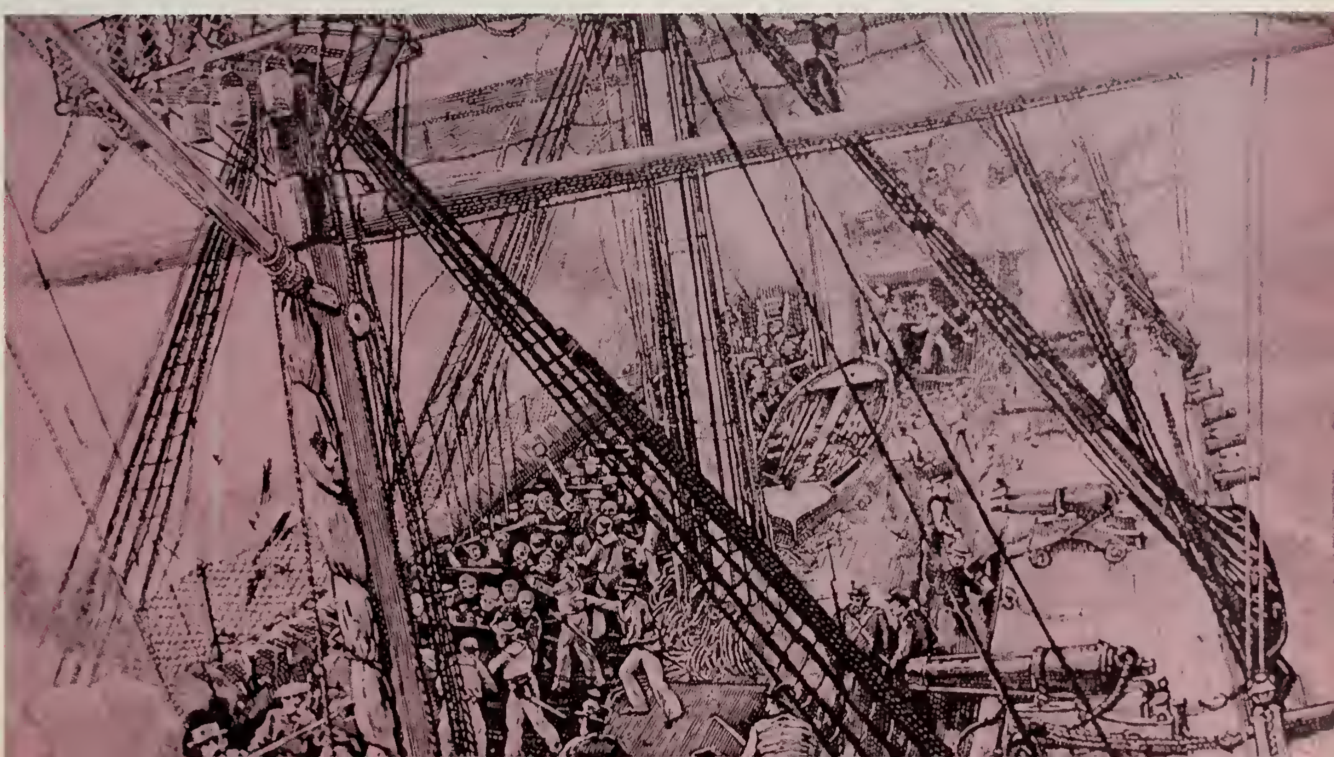
John Paul Jones again was the main character during a notable event and the author of a statement that was symbolic of the spirit of the newborn Navy. On 23 Sep 1779 in *Bon Homme Richard*, John Paul Jones and his crew defeated the superior British frigate *Serapis*. The highlight of the battle came when, after being asked if he had struck colors, Jones replied, "Struck, sir? I have not yet begun to fight!" The words inspire Navymen to this day.

U. S. Navy—The Early Years

Between America's two wars with Great Britain, the early U. S. Navy was involved in two other conflicts. The first was the "Quasi-War" with France, 1798-1801, which was entirely a naval war. It followed worsening diplomatic relations with France, including a refusal by the French secretary of foreign affairs, Talleyrand, to receive U. S. representatives unless a bribe was paid and a loan granted. The famous expression "Millions for defense, but not one cent for tribute," originated at this time. The Quasi-War was the baptism of fire for the United States Navy under the new Constitution. Such historic ships as USS *Constellation*, *Constitution* and *United States* were in this action.

In the War with the Barbary States, the U. S. Navy was sent to the Mediterranean to deal with the Barbary States who were forcing other nations to pay ransom

Below: Constitution versus Levant and Cyane during War of 1812. At left: General Washington meets the French aboard ship. French were to become allies of the Americans, and the French fleet under Admiral Comte de Grasse played important role, including significant part in the siege of Yorktown.



for safe passage through the Mediterranean Sea. During the campaign, Lieutenant Stephen Decatur and 84 seamen slipped into the harbor at Tripoli on 16 Feb 1804 and burned the captured frigate *Philadelphia*. Not a single American Navyman was lost. Britain's Admiral Lord Nelson described the raid as "one of the most bold and daring acts of the age."

The War of 1812

Brought on, in part, by British impressment of American seamen, the War of 1812 soon became an excuse for England to make her presence felt and demonstrate her power on the American continent. During this war, on 19 Aug 1812, Captain Isaac Hull in *Constitution* defeated the British frigate *Guerriere*. *Constitution* earned her nickname "Old Ironsides" here, but more importantly, the victory convinced Congress and President Madison that a stronger Navy was needed to win the war and protect the country.

Almost a year after Hull's important victory, another notable event occurred in naval history. On 10 Sep 1813, Captain Oliver Hazard Perry defeated a British squadron on Lake Erie and wrote his dispatch, "We have met the enemy and they are ours." Perry's win cut British supply lines on the Great Lakes, gained control of Lake Erie and strengthened the American claim to the Northwest Territory.

Important Strides

The War of 1812 lasted until 1814, and as in all its conflicts the Navy was turning its attention to new methods of advancement. Some important strides forward were made in ship design. In 1814 the world's first fully steam-powered warship, USS *Robert Fulton*, was launched at New York. Originally called *Demologos*, it was renamed for the inventor who worked on its design and construction. The Navy's *Fulton* was the first to be designed and built as a steam-only ship.

USS *Princeton*, which was the Navy's first successful propeller-driven steamship, came some decades later. Launched on 5 Sep 1843, she had an innovative propeller which eliminated the vulnerable paddlewheels and permitted ships' engines to be placed in protected below-deck spaces.

In these years of peace, the Navy also took the first steps in Antarctic exploration. Notably, when Lieutenant Charles Wilkes visited the subpolar region in January 1840 and proved conclusively that the icy land was, in fact, a continent.

War again loomed on the horizon in the 1840s. In May 1846, following a series of incidents resulting from the admission of Texas as the 28th state in the Union, and the crossing of the Rio Grande by Mexican troops, the Mexican War was declared by the United States. It was largely a land war, but U. S. Navy involvement in this conflict included blockade of port cities in the Gulf and protective action by the "Mosquito Fleet" during the first large-scale amphibious operation in U. S. military history. This called for the landing of some 10,000 U. S. troops at Vera Cruz, said to be at the time one of the most powerful fortresses in the Western Hemisphere. (The Navy itself was not equipped to carry out such an operation at that time.) Marines too were involved in this war—they marched with Scott to Mexico City, from whence came the phrase "halls of Montezuma" in the famed Marines' song.

The Navy had a hand in an important event in diplomatic relations when Commodore Matthew C. Perry signed a treaty with Japan on 31 Mar 1854. It opened the country's ports to American trade and provisioning of ships. England and Russia soon followed with their own treaties, all modeled after Perry's.

The Civil War

This sad and bloody struggle between the States was the stage upon which many notable events in the U. S. Navy's history were set.

A tight Union blockade of the South led to the first ironclad battle, fought between USS *Monitor* and CSS *Virginia* (ex USS *Merrimack*) at Hampton Roads, Va., on 9 Mar 1862. After four hours *Virginia* broke off the engagement, and no one could say for sure exactly who won, but it did prevent the blockade from being broken. The battle also insured Union supremacy of the sea, and made wooden Navy ships obsolete.

On the Mississippi River, the capture of Vicksburg, Miss., by the combined naval forces of Rear Admiral David G. Farragut, Acting Rear Admiral David D. Porter and the commander of the Army in the West, U. S. Grant, gave the North control of the entire river. Among other things, this cut off important Confederate supplies of food and clothing coming from Louisiana, Texas and Arkansas.

Far left: Constitution forces Guerriere to surrender near Boston, 1812. Second column, above: The first ship to be named Fulton is launched in New York City, 1814. Bottom: view of Antarctica, 1840, during Navy exploration. Above: Commodore Perry is greeted in Japan, 1852. Top right: Confederate submarine CSS H. L. Hunley, 1863. Right: Aft view of sunken USS Maine, 1898.

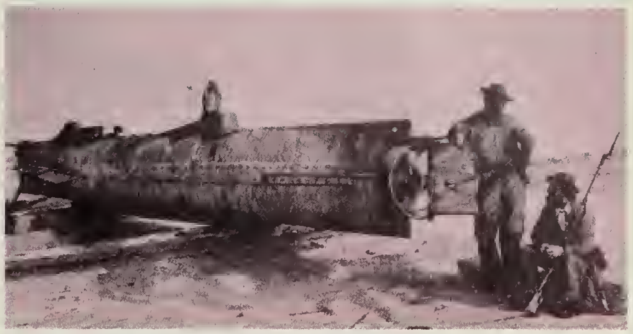
At Charleston, S. C., CSS *H. L. Hunley* "torpedoed" and sank the steam sloop of war USS *Housatonic* on 17 Feb 1864. Although the attack is believed to have been made when *H. L. Hunley* was at least partially surfaced, the event is notable because it is considered to be the first successful submarine attack. (See page 32 for the "Submarine Navy ").

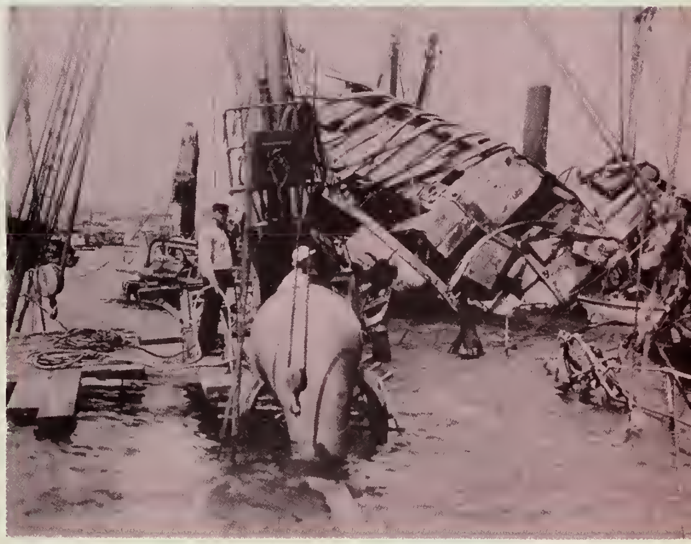
In the same year, on 5 August, Farragut damned the torpedoes and went full speed ahead to win the Battle of Mobile Bay. This victory closed the South's most important port (since New Orleans had already fallen) and tightened the Union blockade. Along with Sherman's capture of Atlanta, Farragut's victory may also have been one of the factors leading to the reelection of President Lincoln. It certainly played a major role in the outcome of the war.

Spanish-American War

At the end of the last century the U. S. and Spain became involved in diplomatic disputes revolving around Cuban independence and wrongs done to our trade and citizens there. On the evening of 15 Feb 1898 the battleship USS *Maine* swung at anchor in Havana harbor when a terrific explosion suddenly tore through her, killing 250 American Navymen. Real cause of the disaster has never been uncovered, but it was a factor in bringing on the Spanish-American War. "Remember the Maine" became our battle cry.

Most remembered event in this short war was when Commodore George Dewey steamed into Manila Bay on 1 May 1898 and ordered, "You may fire when you are ready, Gridley." Dewey's resounding victory destroyed Spain's naval power in the East and was instrumental in bringing the war to a swift conclusion. The action also impressed European nations with the growth of American seapower.





Shortly after the Battle of Manila Bay, U. S. naval forces at Cuba cornered the Spanish Atlantic Squadron at Santiago Bay. On the morning of 3 Jul 1898 the Spanish tried to break out of the bay and were annihilated. Cuba and Puerto Rico fell shortly afterwards. The war came to an end.

Turn of the Century

The 20th century began with a world at uneasy peace. The U. S. Navy took the time before World War I to develop some new weapons. In April 1900 the Navy accepted its first operational submarine, USS *Holland*.

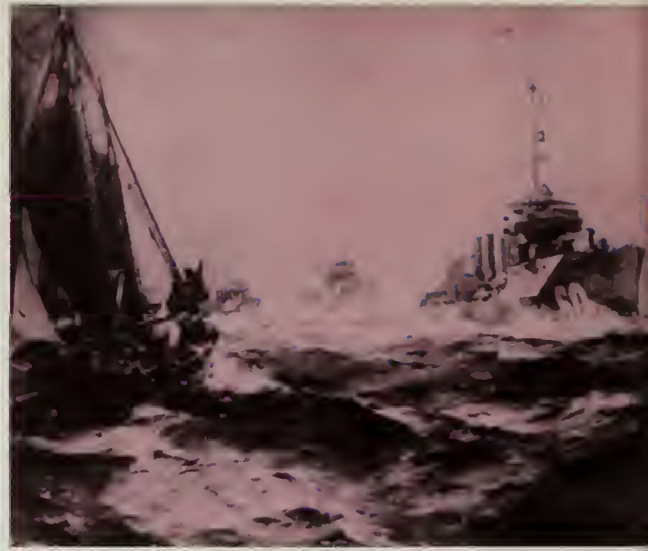
In the following year the first destroyers were launched—500-ton ships capable of 28 knots. Fire control methods were improved and telegraphy was introduced to the Fleet. Another giant step in weapons development came on 12 Apr 1911 when Lieutenants Glenn Ellyson and Jack Towers began flight training under Glenn Curtiss, becoming the Navy's first aviators.

Navy involvement in exploration continued during the century's first decade: a most notable event occurred on 6 Apr 1909—Commander Robert E. Peary, accompanied by Matthew Henson, achieved the long-sought goal to reach the North Pole.

In pre-WW I days, the Navy also carried out its role as a diplomatic arm of the Government. On 16 Dec 1907 the Great White Fleet left Hampton Roads, Va., for a round-the-world cruise to show the flag. The exercise demonstrated U. S. power and purpose and successfully thwarted a developing war with Japan over the Open Door Policy.

World War I

Although the United States entered the first world war late, there was sufficient time for the Navy to make plenty of history. First historic event came on 4 May 1917 when six American destroyers commanded by Commander Joseph K. Taussig steamed into Queenstown, Ireland, becoming the first U. S. Navy ships to commence operations in European waters. The event, billed as the "return of the *Mayflower*," was a great morale booster and aid for the Allied forces. The incident is probably best remembered by CDR Taussig's simple remark upon reporting to the British admiral in charge: "I shall be ready when refueled, sir."



Another notable event of WW I came on 17 Nov 1917 when the destroyers *Nicholson* and *Fanning* became the first U. S. ships to sink an enemy submarine— U-58, 10 miles east of Queenstown, Ireland.

The Navy got its first flying ace during WWI too. Lieutenant (jg) David S. Ingalls, flying a Sopwith *Camel* over Nieuport, shot down his fifth enemy aircraft in six weeks (see page 80-81).

The U. S. Navy's most significant WWI contribution was the convoying of millions of troops through submarine-infested waters without a loss in transit to Europe. In this effort, Navy destroyers performed a vital role.

Between the Wars

The flying machine proved itself in WW I, and two notable events between world wars were involved. The first occurred on 27 May 1919 when the Navy flying boat NC-4 landed at Lisbon, Portugal, and became the first plane to complete a transatlantic flight. Continuing on to Portsmouth, England, her whole trip took less than 71 hours' actual flying time.

Second event took place on 20 Mar 1922 when the rebuilt collier, *Jupiter*, was commissioned USS *Langley* and became the Navy's first aircraft carrier. On 17 October the first landing while underway was accomplished, carrying out the promise of a shipboard landing and takeoff a decade earlier. *Langley* spent a great deal of her time in training Navy pilots and the importance of this later bore fruit in the Pacific against Japan.

One other air feat between wars was notable—in November 1929 a Ford trimotor named *Floyd Bennett* carried Commander Richard E. Byrd and his crew on the first flight over the South Pole. CDR Byrd thereby became the first man to fly over both poles.

World War II

On the morning of 7 Dec 1941 the Rising Sun came out of the west when the Japanese pounced on Pearl Harbor. On that morning, over 15 U. S. Navy ships were sunk or damaged, including all eight of the Pacific Fleet's battleships; some 3400 Navy and Marine Corps personnel were killed or wounded. The U. S. declared war on Japan the next day.

Four short months after the attack on Pearl Harbor, the U. S. struck back at the heart of the enemy. On 18 Apr 1942, 16 Army Air Force B-25s, commanded by Lieutenant Colonel "Jimmy" Doolittle, were launched from USS *Hornet* for an attack on Tokyo. This first raid on the Japanese homeland did relatively little damage, but boosted American morale tremendously.

In the following month the Battle of the Coral Sea was fought. An American victory stopped the Japanese advance toward Australia and New Zealand. It was also the first battle in history where opposing ships did not exchange shots, but attacked each other with aircraft.

Far left: U. S. submarine Holland. Ship at right is Russia's Retvizan, circa 1902. Top left: "Return of the Mayflower," when first U. S. ships arrived in European waters during WW I. Bottom left: First landing on Langley, 1922. Above: Army B-25s ready for takeoff from USS Hornet for Doolittle's raid on Tokyo, 1942. Right: Task force sails from Saipan after landing Marine and Army troops, June 1944.

In the next month, June, another battle, considered one of the most decisive battles in world history, was fought when the Navy defeated a Japanese invasion fleet heading for Midway Island. It altered the balance of power in the Pacific in favor of the Americans. Like the Battle of the Coral Sea, it was a major loss for the Japanese.

In November 1942 the naval Battle of Guadalcanal was fought—After three days of bitter fighting, the Japanese naval forces retreated and U. S. Marines were able to secure the island. With the fall of Guadalcanal, the southern Solomons came under Allied control and Australia was in less danger of attack.

On 19 Jun 1944 U. S. Task Force 58 caught the combined Japanese Fleet steaming out of Tawi Tawi in the southern Philippines. The Battle of the Philippine Sea ended with the Japanese carrier forces short of ships, planes, gas and pilots. Unable to replace these, the Imperial Navy was never able to recover from her losses, although many desperate battles were to follow.

Final blow to the Japanese Navy came on 23 Oct 1944—in a last chance effort to salvage the Philippines, they sent a naval force consisting of battleships and other ships they could muster together to Leyte Gulf to attack the U. S. Fleet. Their plan backfired and the operation was a complete failure—the deciding catastrophe for their navy. The ensuing loss of the Philippines severed their empire and the homeland was cut off from its main source of supply from the south. With the losses at Okinawa and Iwo Jima, the war in the Pacific was approaching its final days.

Earlier, on the Atlantic side of WW II, the U. S. Navy had been fighting off U-boats in the long, running Battle of the Atlantic, protecting convoys bound for Europe. Eventually the German sub menace was contained, and England and Europe got vital supplies and troops safely.

The Navy's most notable Atlantic action may have been its part in the 6 June invasion of Normandy, the largest amphibious operation in history. The greatest armada ever assembled carried out minesweeping, shore bombardment, amphibious operations and supply and troop transportation. These enabled the Allies to successfully complete D-Day landings and eventually push on to Germany.

Korea

Following WW II, the U. S. Navy turned its attention once again to Antarctica with an important event called Operation Highjump, which began to get underway in 1946. Seaplanes flying from the open sea and the airstrip at Little America photographed the interior and coastline of the "white continent."

But scientific and exploratory pursuits were interrupted by the outbreak of the Korean War.

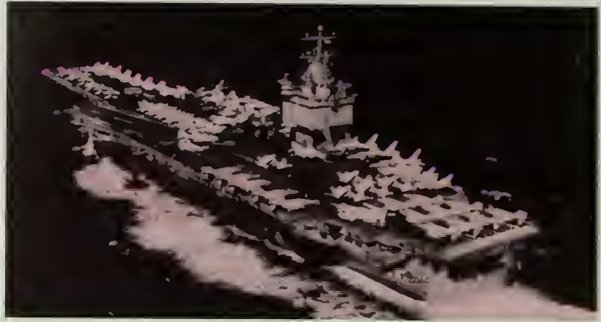
Three days after the decision, supported by the United Nations, was made to give the Republic of Korea air and naval assistance—29 Jun 1950—the cruisers USS *Juneau* and USS *Dehaven* fired the first bombardment of the war.

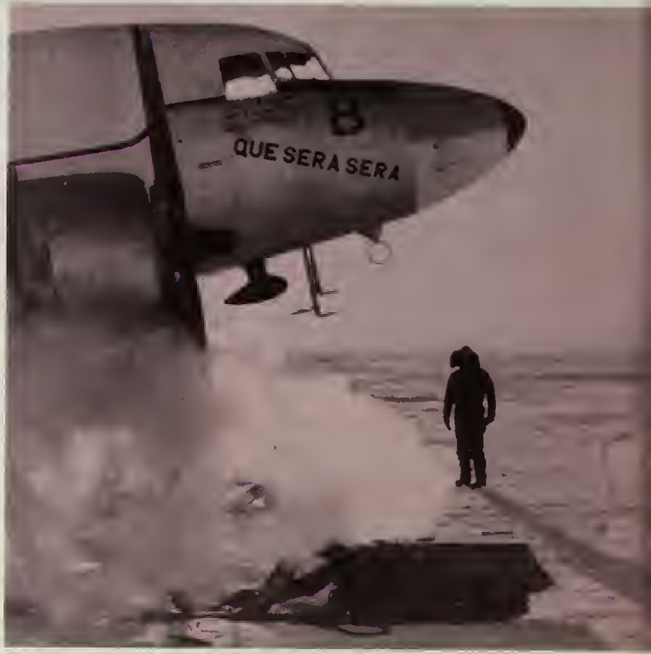
Most notable event of the war came on 15 Sep 1950 when the amphibious landings at Inchon began, under massive shore bombardment by U. S. Navy ships. The successful operation cut enemy communications, split their forces and resistance dissolved in the area. *Missouri's* shelling of supply roads far inland demonstrated a new concept of the Navy's ability to intervene successfully in a ground operation whose main action is far ashore.

From Korea to the Space Age

With hostilities in Korea ended, the Navy picked up projects which had been temporarily dropped, particularly in the scientific field. Many notable results have come from these activities.

In nuclear propulsion, the U. S. Navy has been a world leader. On 17 Jan 1955 the world's first atomic submarine, USS *Nautilus*, swept into Long Island Sound on her maiden voyage. Four years later, on 9 June, USS *George Washington* was launched—the world's first nuclear ballistic missile submarine. In 1960 another nuclear sub, USS *Triton*, became the first ship to circumnavigate the globe under water.





Submarines were followed by the world's first nuclear-powered surface warships, the guided missile cruiser USS *Bainbridge*, launched 15 Apr 1961, the guided missile cruiser USS *Long Beach*, commissioned 9 Sep 1961, and the attack carrier USS *Enterprise*, commissioned 25 Nov 1961. On 3 Oct 1964 these three ships ended Operation Sea Orbit—a 64-day long, around-the-world, unreplenished cruise.

Exploration of Antarctica continued. On 31 Oct 1956, a Navy R4D aircraft named *Que Sera Sera* became the first aircraft to land at the geographic South Pole. A seven-man party remained at the pole for 49 minutes and set up navigation aids for future flights.

At the other end of the world, another notable polar event took place when USS *Nautilus* became the first ship to reach the North Pole as she passed under it on 3 Aug 1958 on her way from Hawaii to the Atlantic.

Space Age

Navy notables occurred in another area of exploration—space. On 17 Mar 1958, *Vanguard*, a three-and-one-half-pound payload, developed by the Naval Research Laboratory, was placed into orbit to test the system designed for launching earth satellites during the International Geophysical Year (IGY). Now the oldest manmade satellite in orbit, it is expected to remain aloft for 2000 years.

During the past dozen or so years the Navy's participation in the U. S.'s manned space program has brought many unforgettable moments. On 5 May 1961, for example, Commander Alan B. Shepard, Jr., made American's first suborbital flight. The 15-minute shot in *Freedom* 7 went 116.5 miles into space.

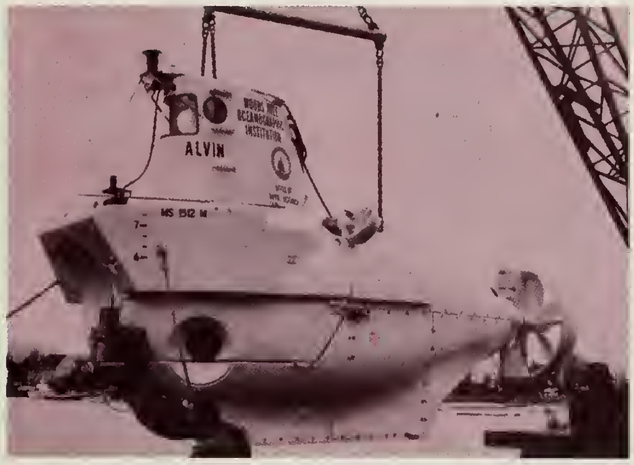
Former Navy pilot Neil Armstrong became the first man to set foot on the moon on 20 Jul 1969. On 14 Nov 1969 an all-Navy *Apollo* 12 crew (Commanders Charles Conrad and Richard Gordon and Lieutenant Commander Alan Bean) lifted off from Cape Canaveral on the second lunar expedition. Another All-Navy crew (Captain Charles Conrad, Jr., and Commanders Joseph P. Kerwin and Paul J. Wietz) splashed down on the first Skylab mission on 22 Jun 1973. The team had set numerous records and accomplished virtually all of its objectives.

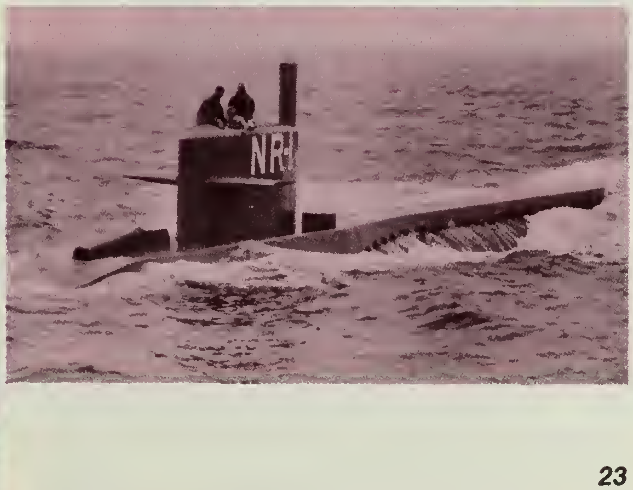
In the past several years Navy scientific endeavors have had notable moments in yet another element—under the sea. *Alvin*, the Navy's first deep-diving vehicle which can properly be called a submarine, was successfully tested at 6000-foot depths on 20 Jul 1965. In the next month 10 aquanauts, including astronaut Commander M. Scott Carpenter, entered the Sealab II capsule, 205 feet down off the coast of La Jolla, Calif. Carpenter remained underwater for 30 days in a successful experiment of submerged living and working conditions. Finally, another notable event in the Navy's oceanography program came on 25 Jan 1969 when the first nuclear-powered, deep-submergence research and ocean engineering vehicle, NR-1, was launched. The five-man vessel is capable of operating for weeks at a time at great depths.

History and the Navy—it's a big story, and an exciting one. We've only been able to ripple the surface here, but that's O.K. Maybe we've whetted your curiosity a little, maybe enough for you to want to take a closer look at your Navy's past. That would be A-O.K., certainly appropriate during our bicentennial.

—JO1 Tom Jansing, USN

Far left: A patrol frigate waits to pick up a Navy demolition team responsible for the destruction of the docks at Hungnam, 1950. Second column, top: USS George Washington, first ballistic missile submarine. Middle: USS Enterprise, first nuclear carrier. Bottom: Que Sera Sera, first aircraft to land at the geographic south pole. Below: America's first man in space, Commander (now RADM) Alan B. Shepard. At right: Alvin, under Navy research contract, was first deep-diving submarine. Bottom right: NR-1, Navy's first nuclear-powered oceanographic research sub.





ON - UNDER - OVER

SURFACE NAVY

The thirteenth day of October 1775 marks the official birth of our Navy. That's when the 2nd Continental Congress established a naval committee and authorized the fitting out of two vessels, one of which would carry 10 carriage guns and several swivels for intercepting transports carrying "warlike stores and other supplies for our enemies . . ." Shortly thereafter, a naval committee pushed through a bill authorizing two additional ships. This was the small beginning of a surface fleet that would sail the oceans' highways and grow into a seapower second to none.

The 13 united colonies knew they were taking on the world's No. 1 Navy, and it didn't take long for the naval committee to get into action. They started off with what they could get fastest—revamped, armed merchantships. Four commercial vessels, including the *Alfred* (see below), lying in Philadelphia were taken for conversion; two schooners and two sloops were added later.

In those days, what constituted a "warship?" During the Revolutionary War and into the nineteenth century, naval vessels were grouped into three major classes. They were:

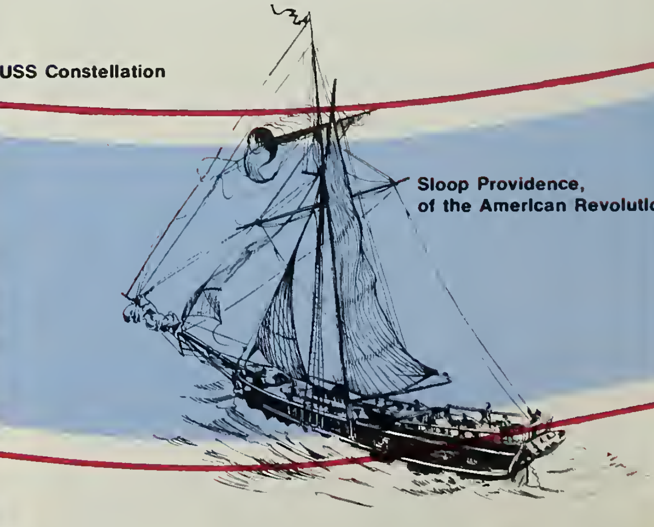
- *Sloops-of-war.* These were small sailing warships carrying 10 to 20 guns on one deck only. (The gun ratings varied with the era.)
- *Frigates.* The cruisers of their day, these were next in size. They generally rated from 28 to 44 guns which were mounted on the spar and gun decks immediately below.
- *Ships-of-the-Line.* The battleships of the sailing days. Largest of all sailing warships, they were equipped with 64 to over a hundred guns of various sizes. Two or more gun decks located below the spar deck were their distinguishing feature.

These then were the main classifications of ships in the navies of the Revolutionary War days (although our Navy's ships-of-the-line did not come into existence until years later, long after the Revolutionary War).

Another group should be mentioned here—the privateers (see page 6). The privateers were commissioned by the Continental Congress and by individual states to capture enemy merchant ships as prizes of war.

Typical of the independent "fleet" of privateers was the schooner, a small, fast, flexible, flush-deck ship that carried smoothbore cannon. With small ships like these schooners, the colonists broke the British stranglehold on main New England harbors, by slipping past the Royal Navy's men-of-war and hiding in inlets. Unable

USS Constellation



Sloop Providence, of the American Revolution

to meet the British head-on, the American ships outmaneuvered them and jabbed here and there instead of standing full force and slugging it out.

To get back to the ships of the Continental Navy—Not long after the razing of the Massachusetts port of Falmouth (now Portland, Maine), the Congress voted to build 13 frigates (of 24 to 32 guns) and to convert six merchant ships ranging from *Hornet* of 10 guns to *Alfred*, with 24 guns. *Alfred* had the distinction of being the U. S. Navy's first flagship and is said to be the first U. S. naval vessel on which the "Flag of Freedom" was hoisted (by John Paul Jones).

Here are some other early Navy ships which convey an idea of what made up the Continental Navy. *Providence* was a 12-gun sloop; *Lexington* was a 16-gun brig (converted from a merchantman); and *Bonhomme Richard* (see page 5), a loan from the French, was an old East Indiaman.

With the end of the Revolutionary War, followed by the establishment of a new federal government, the infant U. S. Navy went into eclipse. By war's end in 1783, the Navy was down to five ships. These were disbanded shortly thereafter, with the frigate *Alliance*, the last of them, being sold in 1785.

It didn't take too long, however, before the need for a Navy was realized, since America's small merchant fleet was being molested on the high seas. In 1794, a Navy-conscious Congress authorized the construction of six frigates. They were to be of a new design—long and strong. They possessed a combination of firepower and class. One of these was *Constitution* (see page 62), completed in 1798. Rated a 44-gun, she was known to sail at 13½ knots. *Constitution* was 175 feet long, (at her gundeck), with a tonnage rating of 1576 tons, and her mainmast towered 105½ feet above her decks.

Constitution fulfilled the thoughts and dreams of President John Adams who did so much in the role of forming the U. S. Navy. It was under Adams in 1798 that the Navy Department was established and the administrative organization of today's Navy began to take shape. One of the first jobs of the newly formed U. S. Navy was that of fighting an undeclared war with France. During this "war," our small Navy came through again. It took 85 French ships.

The Tripolitan War and War of 1812 saw bigger ships coming into the Navy. Typical was our first ship-of-the-line, *Independence*, followed by the 74-gun *North Carolina*. The latter, authorized in 1816, was a true ancestor of the battleship, and had an awesome punch.

Harnessing the power of steam was the most important development in the surface Navy during the first half of the 19th century. Steam began to replace the not-so-reliable wind as a means of propulsion and promised to eliminate some of the hazards and delays caused when ships were blown off course or left dead in the water.

The basics of steam power had been known for centuries before being applied to ships (its principle was known by the ancient Greeks). However, it was Robert Fulton, who demonstrated successfully its practicality as a commercially viable steamboat. After making a number of important modifications to James Watt's basic steam engine, Fulton had sailed his riverboat *Clermont* up the Hudson River in 1807. Fulton helped build *Demologos*, the Navy's first warship to use steam. She was originally intended for defense of the port of New York during the War of 1812. She was rechristened *Fulton* in his honor and served the Navy under that name.

Many old-time Navymen, however, could not picture steam-powered machinery replacing wind and canvas. Even after she had proved herself practical, *Fulton* was later equipped with sails by leaders of the old school and was not very active (she was later housed over and used as a receiving ship).

The Navy continued to expand its sailing fleet. From 1815 to 1840, more 74-gun ships-of-the-line were built. In 1837 the Navy launched the 3104-ton *Pennsylvania*, largest of America's ships-of-the-line. By that time the American merchant fleet had several hundred steam-powered vessels and many of the problems involving steam propulsion were being solved. In 1841 the Navy launched USS *Missouri and* USS *Mississippi*, our first ocean-going, steam-driven capital ships.

Through the efforts of farseeing men like Commander Matthew Calbraith Perry, USN, the Navy was becoming more steam-conscious. Perry, who is referred to as the "Father of the Steam Navy," had been enthusiastic about the possibilities of steam while in charge of construction and in command of the Navy's second steam frigate *Fulton*. Steam was now hailed as the most important naval development since the cannon.

While advances with steam were slow, the Navy had been making other strides. It began making its ships with iron instead of wooden hulls. The year 1843 saw the launching of the Navy's first iron-hulled warship, the paddle sloop *Michigan*. This side-wheeler was 163 feet long. It displaced 685 tons, had a barkentine rig

Constellation, launched in 1797

"Lucky Little Enterprise," 1799-1823

and was powered by a 170-horsepower, two-cylinder steam engine. Without using her sails, *Michigan* was capable of making eight knots.

The newly built steam ships posed problems if engaged in battle for their paddlewheels and steam engines could easily be damaged by enemy fire. To help remedy this, the paddlewheel housing was designed so that it was enclosed behind five-foot-thick walls and set in an inboard channelway (this had been Fulton's design for *Demologos*).

Improvement of steamships had to overcome problems one by one. Stronger engines still had to be developed; screw propellers were needed to replace the paddlewheel; coal as a fuel had to be recognized as more efficient than wood. All of these changes didn't happen overnight, and required long and agonizing periods of trial and error. But in the 1840's new ideas were being explored and voiced by their proponents.

Wooden hulls were also on the way out. In 1848, *Vermont* was launched as our last wooden ship-of-the-line.

The Civil War brought many fantastic ships to a now rapidly changing Navy. Both Union and Confederate navies were engaged in frantic shipbuilding programs. It brought the era of ironclads into full swing.

Launched in 1862, *New Ironsides* was a powerful ironclad and had the finest armor yet, and once survived 50 hits.

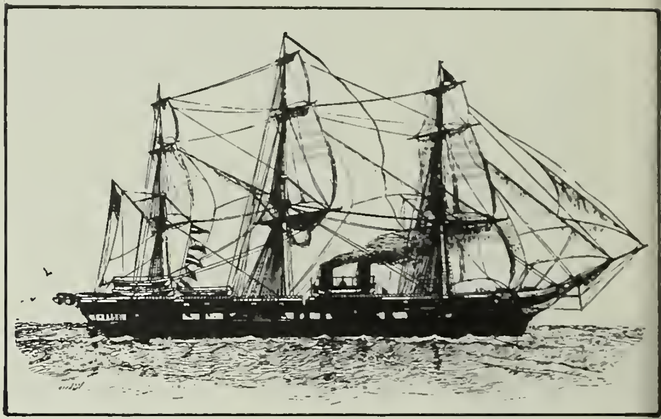
The Civil War also gave us those two famed ironclads of a new type, *Merrimack* and *Monitor* (which also sported a turret). *Monitor* was ungainly, called a "cheese box on a raft," but she and her Confederate counterpart (renamed *Virginia*) rang up the curtain on the era of the ironclads. The battle of the ships was indecisive, with both sides claiming victory.

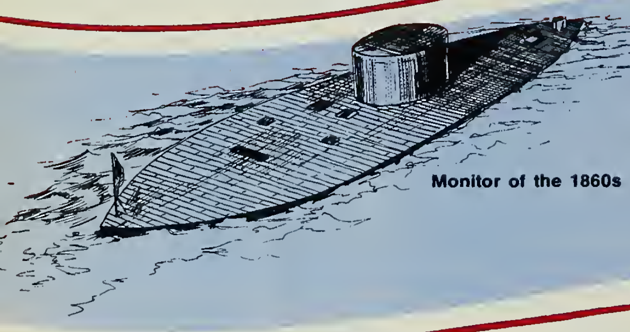
Also appearing on the scene were riverboats, rams and gunboats. Probably more changes and advances were made in ship designs during the four years of the Civil War (1861-65) than during any prior period of similar duration since our Navy had its start in 1775.

From 1861 to 1865 the number of ships grew from 90 to 670; officers from 1300 to 6700; enlisted men from 7500 to 51,200; and the annual budget increased from $12 million to $123 million. Also during that war a number of special ship classes designed for special tasks were developed. Following past traditions, many were made specifically to fight on rivers and close to shores, where most naval action took place.

Still, after the Civil War the Navy had begun to experience a downward trend. A year and a half after the war, the total number of Navy ships was 236, of which just 56 were in active squadron service.

If steam power was the major development in shipping during the first half of the 19th century, iron construction of ships would be the outstanding development of the second half. However, the two developments had to go hand in hand. The advantages of steam power were recognized by all the navies of the world,





Monitor of the 1860s

but iron warships called for large steam engines to power them, and the engines in turn called for bigger ships to accommodate them.

The shipbuilding world had now turned its eyes to iron, first as a framing product and then as a material for the entire ship. When iron was first used in framing, it reinforced ships so they could be used to ram their opponents as well as fire on them. It was several years before an economical way to process iron strong enough for the entire construction could be found. (Aside from war, wooden ships had the advantage of being cheaper to build than iron ships.)

Above left: U. S. frigate Franklin, laid down in 1854 and built from "razeed" ships-of-the-line. Center left: Deck scene. In early 19th century Navy. Bottom left: Monitor and Merrimack battle it out in 1862. Above: The twin-screw protected cruiser Chicago was built in 1880s by John Roach, who played important role in developing iron ships. Below: Admiral Dewey's squadron in Battle of Manila.

One of the major proponents of iron ships was John Roach. An emigrant from Ireland, he learned the trade of iron molding in his youth. In the 1870s he built many iron ships for the merchant marine. He came to be known as "the father of iron shipbuilding in America." He was also to build ships for the U.S. Navy.

But by 1881 the Navy did not have a single armored ship left.

Conditions throughout the world, however, made the country somewhat aware of the Navy's state. In 1882 and 1883, Congress once again came to the Navy's rescue by authorizing construction of the "protected cruisers" *Atlanta*, *Boston*, and *Chicago* and the dispatch boat *Dolphin*. Their "new look" appearance, despite the fact that they had both masts for sails and stacks for smoke, heralded the "new Navy"—a steel-hulled Navy which presaged the end of the ironclads introduced only 40 years earlier. These new cruisers were in the 13-to 14-knot class. They sported new guns, new types of turrets and armor.

With an uneasy international situation in the last decades of the 19th century, public interest was revived and the Navy once again began to regain strength. Continued changes were made as the new steel Navy took on new shapes. Still clinging to the past, *Newark*, a 4098-ton protected cruiser, was the last of the Navy's warships to be fitted with sails. She was launched in 1890 and commissioned the following year. However, she incorporated many improvements and has been labeled as "the first modern cruiser in the U. S. Fleet."

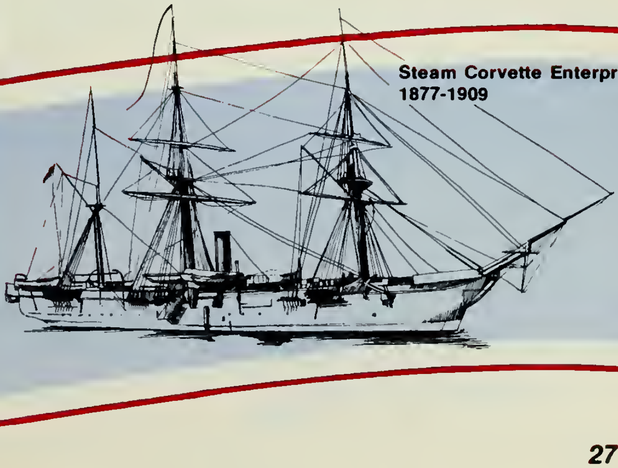
With the development of the torpedo, long-range torpedo boats made their debut. Among the first to join the Fleet (in 1890) was the 22.5-knot *Cushing*. The Navy acquired 16 fast torpedo boats and three 185-tonners capable of speeds of 27 knots.

These torpedo boats gave rise to another change in the shape of ships, a torpedo boat destroyer, such as *Truxtun*. This new type of ship led to our present-day destroyers. They were designed to combat torpedo boats and, improving on the past, destroyers themselves began carrying torpedoes and tubes.

For a time destroyers were used primarily to deliver torpedo attacks. With the development of the submarine, they became submarine hunters and during the years that followed took on numerous roles.

Construction of our first destroyer, displacing 420 tons, began in 1899. They proved so successful that destroyer-building on a large scale began. From 1892 to 1914, the start of World War I, over 50 destroyers had been built, and 273 were ordered during the war.

By 1895, the heavy elements of the U. S. Fleet



Steam Corvette Enterprise, 1877-1909

consisted of 15 light steel cruisers, the heavy armored cruiser *New York*—and three battleships. The first two were USS *Texas*, commissioned on 15 Aug 1895, and *Maine*, commissioned on 17 Sep 1895. Both were listed as "second class" battleships.

Texas was the first and smallest of our battlewagons. The third ship, commissioned in 1895, was our first "first class" battleship, USS *Indiana* (BB 1).

Pride of every major navy and the culmination of major changes that had taken place in ship design during the 19th century, battleships carried heavy guns and a corresponding wealth of armor protection. The U.S. had begun building her battlewagons in the late 1880s; each succeeding class had more firepower than the one before.

The Spanish-American War and Dewey's victory at Manila saw the emergence of the U. S. Navy as one of the world's seapowers. This was again demonstrated visually with the cruise of the Great White Fleet in the first decade of the 20th century.

New inventions, improved training, and long-range guns resulted in the development of new dreadnaughts. In 1906, the U. S. launched a large battleship building program. Evolving from this, several new classes of BBs appeared. They ranged from 518-foot, 20,000-tonners with 12-inch guns of *Delaware* class on up to 624-foot, 32,600-ton wagons. Of these, five ships of the *New Mexico* and *Colorado* classes were not completed until after World War I, and many new improvements, based on lessons learned from wartime experiences, were incorporated into their design. Battleships of the *Colorado* class were our first to be equipped with 16-inch guns.

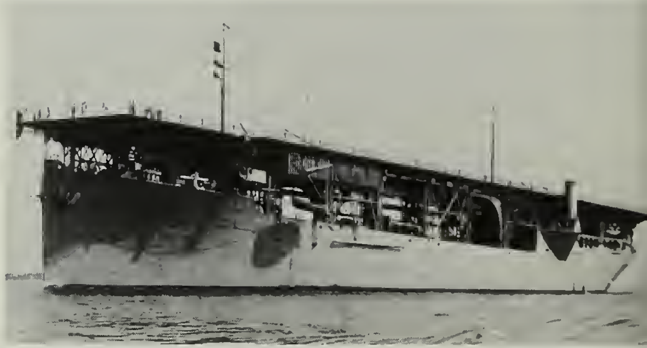
Meanwhile the aviation age had arrived (see the section on aviation in this issue) and the Navy immediately began experimenting with the new flying machine. In November 1910, Eugene Ely made a daring takeoff from a 57-foot platform rigged on the cruiser *Birmingham*. In January 1911 he accomplished another unusual feat. He made the first shipboard landing on a platform mounted on USS *Pennsylvania*.

Meanwhile, also, the Navy was switching fuels, from coal to oil. USS *Paulding* (DD 22) was a pioneer in the shift to oil in 1910. USS *Nevada* (BB 36), the keel of which was laid in November 1912, commissioned on 11 Mar 1916, was the first of the battleships to use oil. It did not happen overnight, but the day of the coal passer was on the way out.

With the entry of the U. S. into World War I, the Navy's shipbuilding efforts were concentrated on destroyers, patrol craft, minelayers and minesweepers. These types of warships were in urgent demand.

Destroyers became a primary symbol of British-American cooperation during WW I. The immediate threat was the German U-boats which were practicing unrestricted warfare and generally terrorizing the seas.

The British and Americans exchanged signals, codes and inventions in combining their destroyer forces to seek out and attack the German subs. Destroyers



WW II Destroyer USS Gurke (DD 783)

served as escorts for troopships and supply convoys for the Allies, helping immeasurably to ensure their safety.

Between the two World Wars, the U. S. built her destroyer fleet to 184 ships. Destroyers also were to become prime factors in America's policy of turning over "overage destroyers" to Britain after the British entered the war against Germany. When the Japanese attacked Pearl Harbor, it was a destroyer—USS *Ward* (DD 139) which was among the first, if not the first, of the American forces to fire against the enemy, sinking a Japanese midget submarine. Destroyers went on to distinguish themselves in fighting enemy submarines both in the Atlantic and Pacific theaters.

Above left: Great White Fleet leaves San Francisco in 1908. Center left: Carrier USS Langley was converted from a collier in 1922. Bottom left: USS Missouri (BB 63) as she looked in 1944. Above: Navy's first three surface nuclear ships (top to bottom) USS Enterprise, Long Beach and Bainbridge. Below: USS Spruance (DD 963), first of new class.

Also between the world wars, the U. S. had resumed in other categories a shipbuilding program which had been interrupted by the earlier conflict. Wartime experience in WW I had proved the value of the airplane, and the Navy immediately took steps to build its aircraft carrier fleet. This was accomplished in 1922, when the collier *Langley* was converted. Five years later, two more carriers, *Lexington* and *Saratoga*, were converted from battle cruiser hulls.

With the success of *Langley*, *Lexington* and *Saratoga*, the U. S. built the aircraft carrier *Ranger*. She was the Navy's first ship to be built as an aircraft carrier. New cruisers, like *Louisville*, were completed during the early 30s.

At the time of the Japanese attack on Pearl Harbor, the U. S. Navy had 343 combatant ships in commission and 344 more in the building ways. In early 1942, three battleships of the *South Dakota* class were commissioned. New names continued to appear and thousands of changes in the shapes of ships were made in the early war years. Such odd-shaped newcomers as landing ship docks (like *Belle Grove*), net layers, PT boats, cruisers, destroyers and auxiliaries of every description and for every type of mission were joining the Fleet daily.

During the early stages of WW II, our ship losses were high. From 7 Dec 1941 to 31 Dec 1943, the U. S. Navy lost 359 vessels. In spite of these losses, naval ship strength doubled during 1943 as our shipbuilding efforts reached an all-time high. Our combatant ships at that time numbered more than 850. In 1943 alone, two 45,000-ton battleships, some 40 aircraft carriers, 11 cruisers, 128 destroyers and destroyer types (APDs, etc.), 306 destroyer escorts and 41 submarines were added to the Fleet. This does not include the countless auxiliaries and yard craft.

The pattern of widespread oceanic war brought about the building of a Fleet unlike any in history. It consisted of a swift striking force, having the advantages of speed, mobility and surprise, yet possessing the firepower and protective armor to stand and slug it out with enemy forces. Such a Fleet was made up of ships with names synonymous with heroism, such as *Tarawa*, *Missouri*, *Tucson*, *Higbee* and *O'Bannon* (to name a few).

In the five-year period ending in late 1944, 9,000,000 tons of vessels had been added to the U. S. Navy. One of the most novel developments among these many new ships was the large assortment of landing ships that began appearing in the early stages of the war.

Possibly the most versatile of the many new types

USS Ramsay (DD 124) acted as guide for flight of NC-4, 1919.

of ships built during World War II were the destroyer escorts, now called frigates.

Attack cargo ships, transports, barracks ships, net tenders, all types of repair ships, radar pickets, minelayers and minesweepers, as well as many other types of ships too numerous to mention, changed the shape of the U. S. Navy almost overnight.

When Japan surrendered, the U. S. Navy had emerged as the strongest navy in the world.

The changing shape of ships has continued with even greater momentum in the past decades, with the New Navy on the threshold of still another new era. This is the era of nuclear propulsion, of jet power, rockets and guided missiles.

Along with the types of ships that have proved themselves in the past there have emerged such categories as guided missile cruisers, tactical command ships and helicopter flattops.

The era of the 50s, 60s and on into the 70s has seen the emergence of the nuclear Navy.

The heart of today's nuclear Fleet is a highly complicated unit known as the nuclear reactor. This is what it offers:

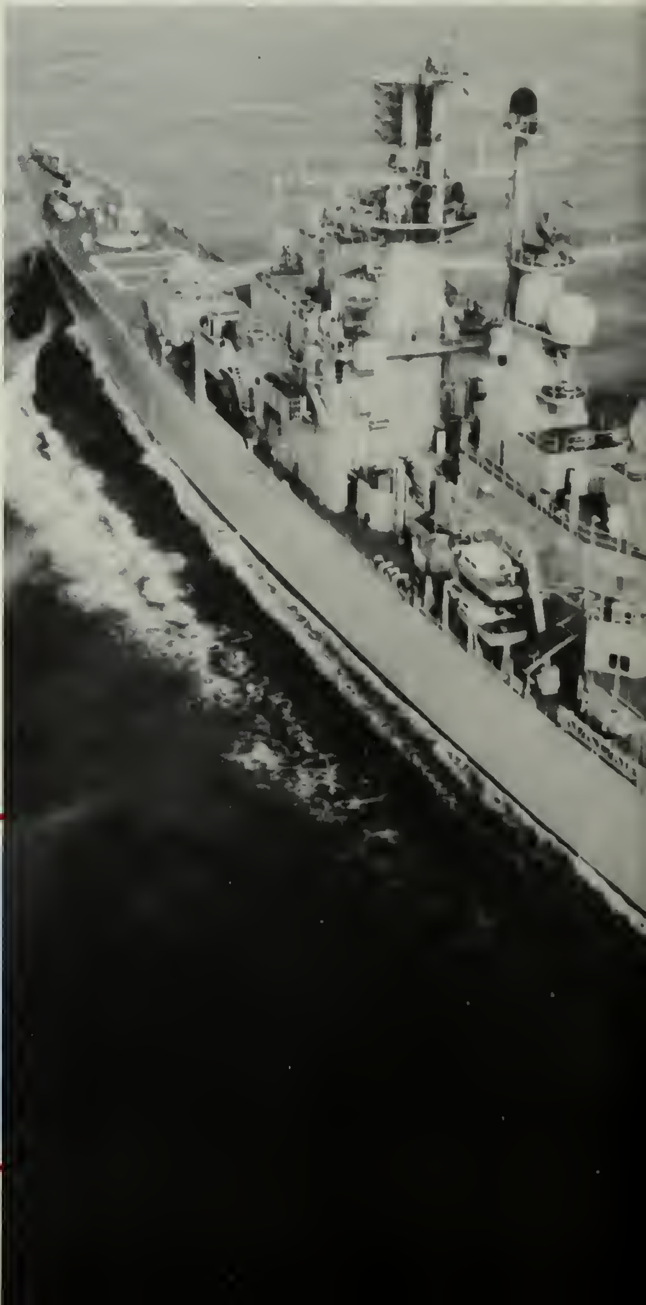
- Nuclear-powered ships with almost unlimited steaming endurance at high speed. This results in increased flexibility, an ability to obtain ammunition, aviation fuel, and other supplies from remote places in a minimum amount of time, and an attack ability in a much greater area.
- Reduced vulnerability. Nuclear ships need not remain exposed as long as non-nuclear vessels during replenishment. They can maneuver to avoid attack.
- Reduced dependence on logistic support. Nuclear ships require fewer mobile support forces.
- Greater attack effectiveness. Nuclear ships can remain in battle areas for a greater length of time and have a greater ability to exploit weather conditions to their advantage.
- Nuclear propulsion does away with huge funnels, thus making more room for such items as big, powerful radar.
- Power is available upon command. It is not necessary to order "more boilers on the line" a half-hour before full power is desired. Heat is produced in the nuclear reactor, in turn producing steam and power with little delay. Reduction from full power to one-third or stop is equally responsive.
- Reduced maintenance. The absence of corrosive stack gases cuts down on the wear and tear—and a lot of at-sea and in-port repairs.

The Navy has seven nuclear surface ships at sea now—four veterans: USS *Long Beach* (CGN 9), launched in 1959 as the world's first nuclear surface ship, USS *Bainbridge* (CGN 25), USS *Truxtun* (CGN 35), and USS *Enterprise* (CVAN 65)—plus three more recently commissioned: USS *California* (CGN 36), USS *South Carolina* (CGN 37) and USS *Nimitz* (CVAN 68).

Now under construction are the first four guided missile cruisers of the USS *Virginia* (CGN 38) class, and two giant aircraft carriers, USS *Dwight D. Eisenhower* (CVAN 69) and USS *Carl Vinson* (CVN 70). For more on the new carriers, see page 91.

The Navy has been advancing in other areas of the surface fleet as well. An example of this is the new class of amphibious assault ships. The LHAs are the

USS Nimitz (CVAN 68), commissioned in 1975



largest and fastest amphibious ships in the Navy inventory and offer the greatest operational versatility in the history of amphibious warfare.

The size of these ships alone is impressive. The first of the class, *Tarawa*, is 820 feet in length with a full displacement of 39,300 tons, making her the largest of U. S. combat ships, excluding carriers. She can carry a large landing force and all their equipment and supplies, landing them either by helo or amphibious craft or both.

The ship is 106 feet wide and the high point of her mast is 221 feet above the keel. What the services call tactical integrity—getting a balanced force to the same point at the same time—is the primary advantage of these general-purpose assault ships.

Then there's the Navy's prime ASW destroyer, the DD 963 *Spruance* class which will shortly be introduced into the Fleet. Five ships of this class have been launched to date. The first is scheduled for delivery in this, the Navy's 200th year, and 29 will follow within the next few years. They are being fitted with our most powerful sonar, coupled with helicopters, our best ASW weapons, and the *Harpoon* surface-to-surface missile system which will be incorporated in this class as soon as the systems are available.

Below: A port quarter stern view of the nuclear-powered guided missile cruiser USS South Carolina (CGN 37).

The *Spruances* will operate in company with the carrier task groups to provide ASW and surface warfare protection, though they can be used very effectively in a wide variety of other missions as well.

Presaging the Navy of the future when surface ships may reach a speed of up to 100 knots, are the Surface Effect Ships (SES) and the Patrol Combatant Missile (Hydrofoil)—(PHM-1).

The SES skims over the water on a cushion of air. Currently, two 100-ton SESs are being tested and one of them has achieved a world record of greater than 80 knots. Preliminary design of a 2000-ton SES has been completed. Potential missions include ASW, AAW, amphibious assault, surface warfare and tactical support; but the most promising applications of the SES remain to be established. The SES's primary asset is her speed, and this will probably make her primary mission ASW operations. A 3000-ton destroyer type SES could cover three times the area of a present-day destroyer, and deliver an antisubmarine helicopter to a specific spot in minutes. With such speed, this type of SES could outrun any torpedo launched against her.

The Patrol Combatant Missile (Hydrofoil) is yet another promising ship. It can be used offensively against major surface combatants and other surface craft, and is well suited for surveillance and blockading roles. The *Harpoon*-equipped PHM-1 will be powered by a gas turbine driving a water jet propulsion system. The first ship, *Pegasus*, is undergoing testing before entry into the Fleet.

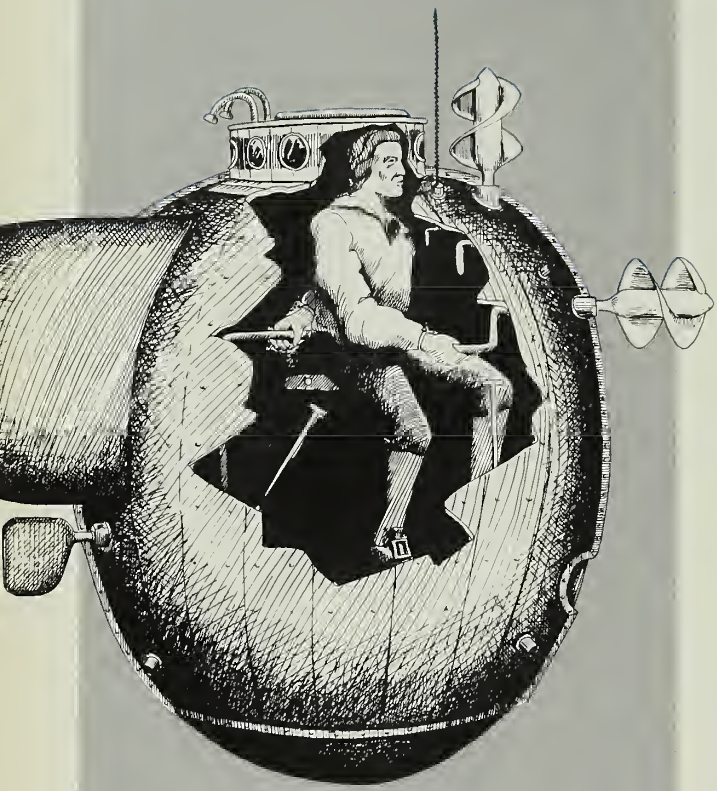
So there it is—a capsule history of the Surface Navy over the last 200 years. Only the highlights have been touched, especially on the ships of the Fleet in 1975. For more on that subject, see the article on page 90.

But, as you can see, the Surface Navy, along with the Air Navy and the Submarine Navy, is modernizing at a fast pace—for an effective, modern Navy must operate above, below and on the surface as a team. The new Surface Navy, in this, its 200th year, is building on its proud traditions as it offers the seagoing sailor a varied and challenging career. It is, in short, an exciting place to be nowadays.

USS Spruance (DD 963)

ON - UNDER - OVER

SUBMARINE NAVY



Cutaway of David Bushnell's Turtle, 1775

A number of men throughout the ages have proposed the building of a submarine. At the height of the Renaissance, its greatest innovator, Leonardo da Vinci, began designing a vehicle that could propel itself underwater. He was fascinated with the thought that man could move in a vehicle beneath the surface of the ocean as well as on top of it.

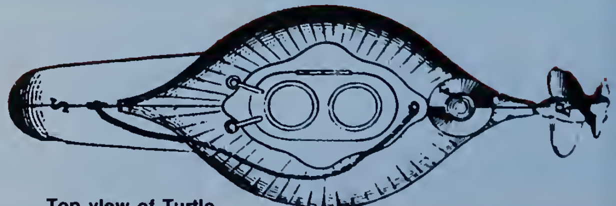
Da Vinci worked out a number of the design principles for the modern submarine, and his drawings on the subject were quite advanced before he put his project aside.

Then there was an Englishman, a naval gunner, William Bourne, who wrote to Queen Elizabeth I that the Spanish Armada could be repelled by a "ship or boate that may goe under the bottome, and so come up againe at your pleasure." John Napier, the Scottish mathematician who invented logarithms, and the monk Mersenus also proposed submarines to be used against enemy shipping.

Drawing on Bourne's ideas, Cornelius Van Drebbel, a Dutch doctor living in England, invented the first working submarine—a rowboat covered with greased leather. The submarine was propelled by man-powered oars protruding through flexible leather seals. Snorkel-type air tubes were held above the surface by floats, thus permitting a submergence time of several hours. Van Drebbel's invention was so successful that, supposedly, King James I ventured into the depths of the Thames River in it.

Like those who followed him, the inventor saw the potential of the submarine as a naval weapon—if only it could be made to operate.

More than a century and a half passed before a young American experimented with a subsurface craft he hoped would help drive the British out of New York harbor, and away from American shores for good. David Bushnell, a Yale medical student, had been



Top view of Turtle

working on a small submarine for some four years and finally completed it in 1775.

This first submarine for warfare, named *Turtle*, was described by Bushnell as having "some resemblance to two upper tortoiseshells of equal size, joined together. . . ." It was 7.5 feet long, six feet deep, and under ideal conditions had a maximum of three knots. A single operator could stay down for 30 minutes.

Turtle was armed with an oak casing filled with 150 pounds of explosives. This charge could be attached to the bottom of an enemy ship where it was intended to remain until detonated by a simple clockwork mechanism.

After completing the boat, Bushnell took it for several dives to prove its seaworthiness. Finally, by September 1776, he was ready to try it against the British in New York. Manned by Sergeant Ezra Lee, a volunteer from the Connecticut Militia, the *Turtle* was driven by hand, using screw propellers. The plan was to attach a time fuse charge of gunpowder to a ship's hull, using screws. It was aborted when the auger could not penetrate the copper sheathing on the hull of HMS *Eagle*.

Bushnell made a couple more attempts, using *Turtle* against the British (this time in the Delaware River) by attaching mines to her and floating the mines against ships. These attempts failed, and the submarine was finally sunk by the British in New York harbor (the first recorded instance of an antisubmarine attack). George Washington called Bushnell's work "an effort of genius," but the builder himself became discouraged and gave up his work with submarines, retiring to a medical practice in Georgia.

When one man's curiosity wanes, another's may be sparked. Robert Fulton, a mild-mannered American now famous for building what has been called the first practical steamboat, turned his attention toward the submarine in 1798. His boat, the *Nautilus*, used a kite-like sail for surface power and carried flasks of compressed air, enabling the two-man crew to remain submerged for five hours. It had the innovations of both a rudder and conning tower.

Fulton tested his strange contraption in France and the French government was soon interested. Fulton had also been testing the explosion of gunpowder underwater, and in 1801 he guided a torpedo into an old schooner hulk with *Nautilus*, blowing it out of the water. But the French government would never commit itself to Fulton, and neither would the British, so Fulton gave up and returned home to pursue his interest in the steamboat.

Even after the steamboat achieved success, Fulton remained curious about how to maneuver beneath the water. During the War of 1812, he launched a small unmanned submarine armed with explosives against the British warship *Ramilies*; the sub did inflict some damage but did not sink the vessel. Fulton then turned to building a giant craft, 80 feet long, which he hoped would end the war. It would be powered by steam and manned by a crew of 100. It was never finished and was left to rust on the shore of Long Island Sound after Fulton's death in 1815.

Another development in submarine invention came in 1850 with the German inventor William Bauer. Bauer built a submarine at Kiel that accidentally sank in 55 feet of water. Sitting on the bottom, Bauer opened the flood valves to equalize the pressure inside the submarine, theorizing that the escape hatch would open. His crew was terrified, but they were soon convinced that this was the only means of escape. When the water was at chin level, the men were shot to the surface with a bubble of air that blew the hatch open. This simple technique was rediscovered years later, and modern subs have escape compartments operating on a similar principle.

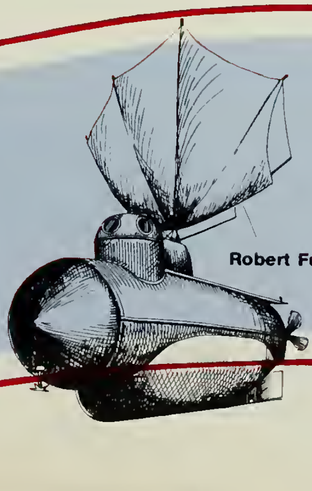
German officials pronounced the submarine as being too dangerous for operation after the Bauer incident. But they recognized that if it could be made to work, the submarine would be a devastating weapon.

Other men continued to experiment with the idea of a submarine. One was a shoemaker named Lodner D. Phillips, who constructed a 40-foot craft on Lake Michigan in 1851. It was only four feet in diameter, and its plans called for a steam engine, but this part of the design never left the drawing board. Phillips actually used his craft as a pleasure boat, taking his wife and children on Sunday outings to explore the bottom of the lake.

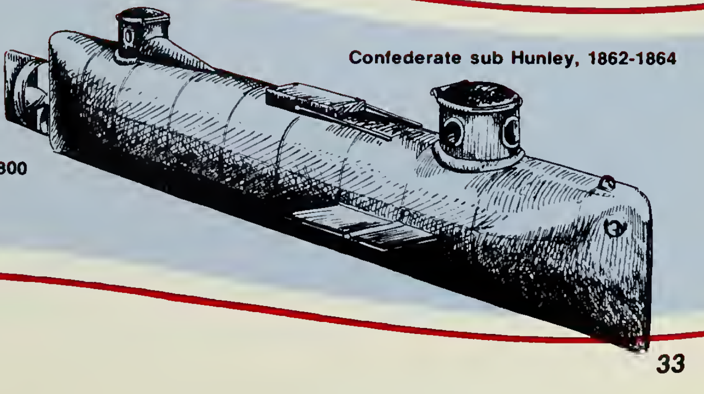
Phillips also designed a warfare submarine far in advance of his time. It had a recess for torpedoes and a submarine gun to work through a ball-and-socket joint. There was a rocket to be fired along the surface of the water, carrying with it a torpedo equipped with diving fins. When the rocket struck and exploded, the torpedo was to dive and burst under the bottom of the target ship. That, too, never left the drawing board.

As with the ironclad ship, it was the Confederate Navy that took the next steps forward in the development of the submarine.

CSS *Hunley* had been built with funds provided by Captain H. L. Hunley, a man blessed with imagination but lacking in practicality. The ends of this 25-foot craft



Robert Fulton's Nautilus, 1800



Confederate sub Hunley, 1862-1864

were loaded with ballast tanks which could be filled for descent but had to be hand-pumped for ascent. Power was supplied by a propeller fitted to a camshaft which ran the length of the ship and was turned by eight sitting men.

Although *Hunley* wrote another chapter in the fascinating history of submarines, she was a real jinx to the Confederates. On her first voyage she nosed into the mud and refused to surface, killing her seven crewmembers. She was hauled up and moored at James Island, where a passing steamer swamped her and six more crewmen were lost. She was hauled up once more and manned with another crew, but again was swept over by another steamer; another three men were killed.

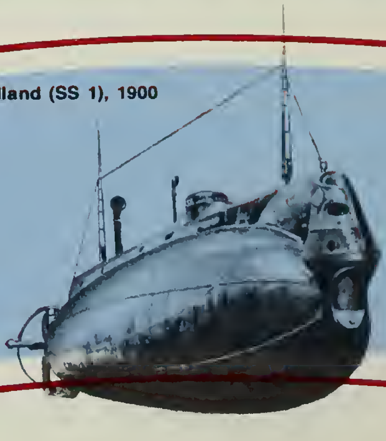
A young Confederate lieutenant, George Dixon, was convinced, however, that the boat could be of great use to the South and he so convinced his seniors. *Hunley* was then moored off Charleston's Sullivan Island, just a few hundred yards from her target, USS *Housatonic*. In the first true submarine attack in naval history, Dixon cast off toward the large warship. The attack was made in calm waters in the dark of night. Although sighted by lookouts on *Housatonic*, there was neither time nor opportunity for the ship to strike back or set sail.

Hunley hit *Housatonic* and drove her shaft deep into the ship's hull. The heavy charge of gunpowder *Hunley* was carrying went off prematurely, and *Hunley* never had a chance to escape. She and all of her crew went down.

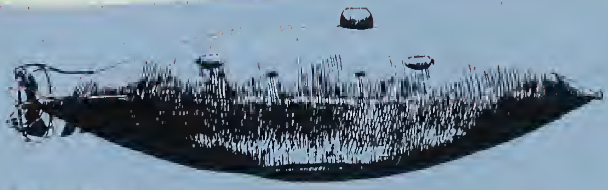
Housatonic had a similar fate; she was holed on the starboard side and went down in just four minutes. Another northern vessel moved to her rescue, however, and only a few of her seamen were lost. In losing his life, LT Dixon had demonstrated that submarines could be useful weapons of war. What they needed was a more effective weapon that could be propelled underwater. The development of the self-propelled torpedo during the next few years provided just that.

Another problem was propulsion. From 1864 to 1872, the U. S. Navy experimented with a hand-cranked submarine named *Intelligent Whale*. The boat failed during most of her first trials, and inventors realized that until a method of propulsion better than manpower could be developed for underwater use, submarines were not going to be worth much.

Surface ships were driven by steam; why not submarines? Well, mainly because it took air, fire and heat, and of necessity those must be in limited supply aboard a submarine. The answer today, of course, is atomic power, but back in the 19th century, there had to be another first. That way was the internal combustion engine. It had its drawbacks, too, but many were overcome by a New Jersey inventor named John Philip Holland and his compatriot, Simon Lake. The two actually favored opposite theories about the submarine. Holland thought that submersion should be made by power-diving, using the force of the propeller and the angle of the bow planes. Lake said boats should descend on an even keel with slight negative buoyancy. Lake was a man more interested in underwater exploration than naval warfare and he also thought that a submarine could be equipped with wheels and driven along the ocean's floor. (He did not pursue that idea.)



Holland (SS 1), 1900



Intelligent Whale, 1864

Holland was more practical; his design included a workable torpedo gun, which Lake's did not. He received a $150,000 contract from the Navy for a subsurface vessel. He failed in his first attempt at building the craft, but the Navy was impressed enough that he was awarded another contract. By 1898, he built USS *Holland*, a cigar-shaped craft, 52 feet long and 10 feet in diameter.

The *Holland* was equipped with a gasoline engine for surface power and whirled generators that charged batteries used for underwater power. She also had an intricate device that was supposed to guide her to a predetermined depth. She was armed with a torpedo tube that fired an 18-inch torpedo and a bow gun recessed into the hull. A New York newspaper commented that "the offensive powers of *Holland* are, considering the size and method of attack, far greater than any other engine of war."

The loss of vision when submerged was corrected by Simon Lake after experimenting with a set of prisms and lenses he bought from a store window display. Before this, *Holland* had to surface so the crew could look out the conning tower and thus she lost her greatest advantage, surprise. Lake and a Johns Hopkins professor worked out the periscope device, and this, with various improvements, was to remain the submarine's basic visual aid until 1958, when underwater television was installed aboard the nuclear-powered *Nautilus* for her polar trip.

Above, left: Navy's first commissioned sub, USS Holland. Above: USS Salmon; commissioned in 1910, was renamed D-3 in 1911. Left: USS Sturgeon (SS 25), one of the first subs to operate with a diesel engine, was commissioned in 1912.

USS *Holland*, first submarine to be purchased by the Navy (in 1900) became SS 1. The Navy ordered a number of these new vessels from Holland and continued experimenting throughout the next decade. One of the main problems which still remained was the gasoline engine—it heated up and gave off noxious fumes which often overcame many of the crew.

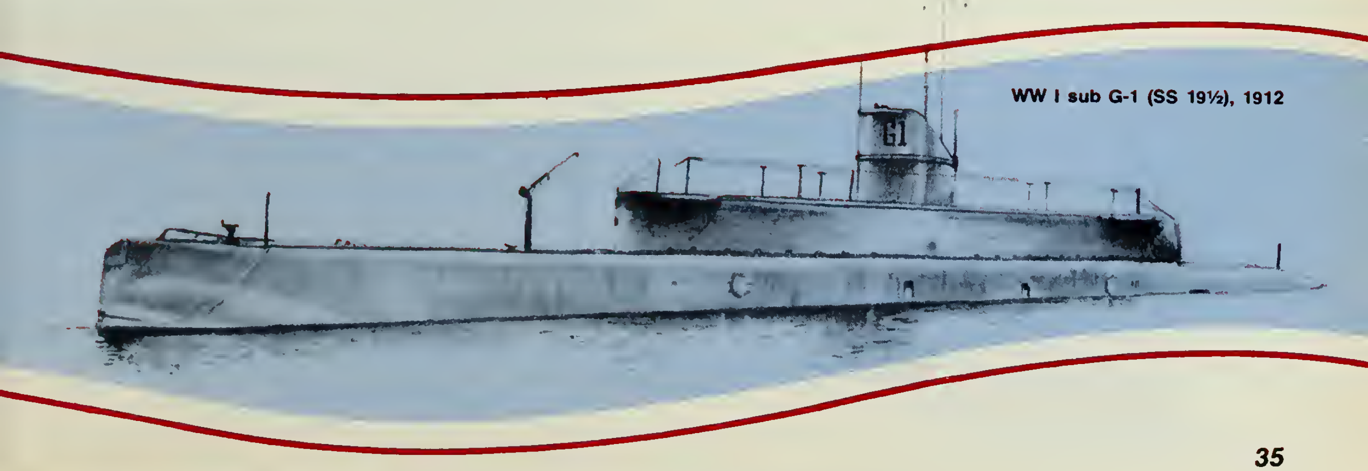
The gasoline engine was replaced by the diesel when that engine was first installed in the first USS *Skipjack* (SS 24) and USS *Sturgeon* (SS 25). This new engine required no complicated ignition or sparking systems, and it produced few noxious fumes and was more economical. The diesel engine and electric battery remained staples for the submarine until nuclear power emerged in the 1950s.

European powers were also interested in submarine development. The French raised 300,000 frances for the development of their submarine, but they ignored the most advanced designs produced by a Frenchman, M. d'Equevilley. The inventor took his design to Germany where it was purchased for the Kaiser's Navy and became the basis for the long line of destructive U-boats.

World War I saw the submarine emerge as a major factor in conflict. The Germans suddenly found themselves in possession of a most effective weapon to effect economic strangulation. England had to import food in order to live. Had the rate of sinkings attained by submarines in the spring of 1917 been continued, England would have been in a desperate situation in a matter of weeks. Insofar as any single campaign can be assigned primacy in a world conflict, it was the defeat of the German submarine menace by the combined efforts of the U. S. and British fleets that staved off impending collapse.

When the U. S. entered the war, her newest submarines were the "L" boats. Twenty submarines of the "E," "K," "L," and "O" type reached the war zone. A crash building program was begun.

The O-boats were about 480 tons, 172 feet in length,



WW I sub G-1 (SS 19½), 1912

SUBMARINE NAVY

with 18' beam. By 1918, the R-boats had joined the fleet (they were slightly larger than the O-boats) and were followed in the twenties by the "S" boats, many of which were used as late as 1946. These latter classes were driven by twin diesel engines with a surface speed of 14 knots and 10 knots submerged. Their range was about 3500 miles.

USS *Argonaut*, when she was launched in 1928, was one of the largest submarines in the world. She displaced 4100 tons submerged and was 381 feet long.

The fleet type submarine, which acquitted herself so ably in World War II, emerged in 1938 as the *Gato* class which was the result of years of experiment and development. She differed from her predecessors in that she was longer and wider and had a cruising range of about 12,000 miles and a surface speed of about 21 knots. The typical fleet-type submarine displaced 1525 tons, was 311 feet long and 27 feet wide. She was powered by four 1600-horsepower diesel engines and carried a complement of seven officers and 70 enlisted men.

When the Japanese attacked Pearl Harbor, there were 111 American submarines in commission, 60 in the Atlantic Fleet and 51 in the Pacific. After the invasion of North Africa, however, it was decided to concentrate U. S. efforts in the Pacific and leave submarine operations in the Atlantic to U. S. allies. Therefore, it was the Pacific that became the hunting grounds for American submarine forces.

The number of American submarines during the war peaked at 247. They consisted mainly of the old O, R, and S Class of submarines with a few of the fleet type. The U. S. lost 52 of these boats during the war along with 3505 submariners.

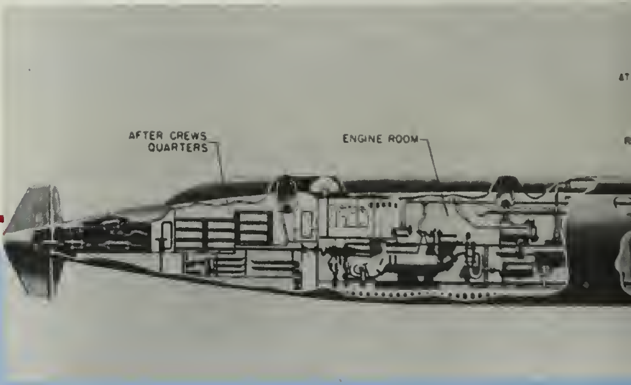
The final submarine score tells one of the real stories of the American victory in World War II. American submarines sank 1750 Japanese merchant ships, and more than 200 combatants; this represented 55 per cent of the total Japanese tonnage sunk in the war. For an island nation such as Japan, these figures represent a fatal impact.

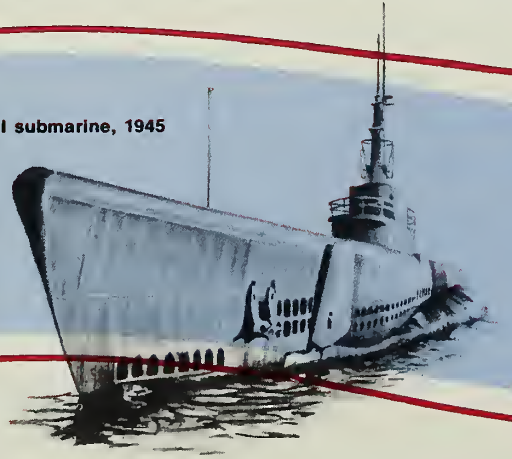
Radar and sonar were innovations which came into full use during World War II. The English used them initially to combat German U-boats but they were also incorporated into the submarine as an attack aid. Sonar has become the most important of the submarine's senses. Hydrophones listen for sounds from other ships, and the echoes of sound waves signaled from the submarine itself.

In addition to sinking over five and one-half million tons of Japanese shipping, the U. S. Pacific submarine force was rescuing aviators from Tokyo Bay itself, scouting islands for weather data and intelligence, transporting Marine raiders, supplying guerrilla movements and planting mines in strategic and dangerous waters.

After World War II, the Navy began to integrate the new scientific advances of the war into newer and better submarines. The *Guppy* (Greater Underwater Propulsion Power) program gave the Navy a streamlined craft capable of startling bursts of speed underwater. Submarines were designed for specific purposes and these included submarines for attacks, transports, oilers, missile launchers, minelayers and radar pickets, and hunter-killer submarines to destroy enemy submarines.

During this same time the Navy was speeding development of the most revolutionary advance in the history of submarines—nuclear power. Early in World War II, as part of the Navy's initial research on the atom, proposals were made for developing atomic power for





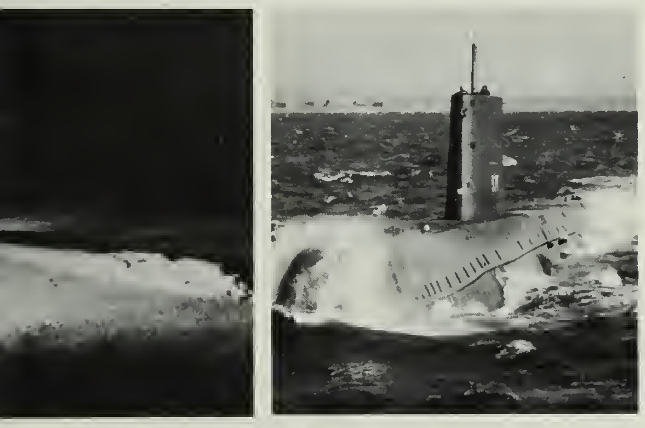
World War II submarine, 1945

use afloat, but most of that work was diverted to working on the atomic bomb.

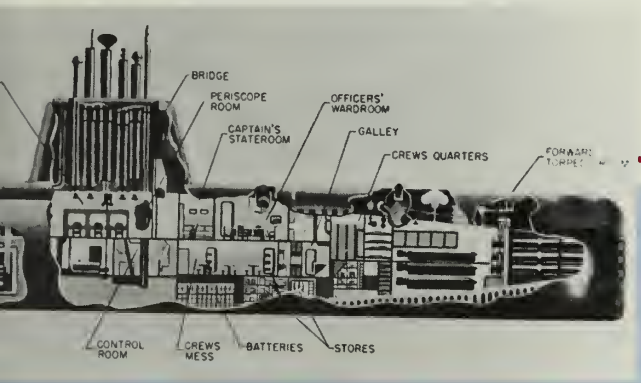
Nuclear power was the long-awaited propulsion source for the submarine. It was to turn the submersible surface ship into a true submarine, capable of almost indefinite operation no longer bound to the earth's atmosphere.

In response to an informal request from Captain (now Admiral) H. G. Rickover, the first study of the application of a high-pressure, water-cooled reactor for a submarine was undertaken by personnel of the Daniels Pile Division at Oak Ridge, Tennessee, in September 1947. In January 1948 the Department of Defense requested the Atomic Energy Commission to undertake the design, development, and construction of a nuclear reactor which would propel a naval submarine. Shortly thereafter, the AEC assigned initial research and conceptual design aspects of the Submarine Thermal Reactor (STR) project to its Argonne National Laboratory.

In December 1948, the Commission signed a contract with the Westinghouse Electric Corporation for the development, engineering design, construction, operation, and testing of a prototype nuclear propulsion plant. The outcome of these efforts is USS *Nautilus* (SSN 571).



Above from left to right: USS Pickerel (SS 524), 1949, surfaces from a depth of 150 feet with a 48-degree up angle. USS Sargo (SSN 583), first submarine to surface during winter season at North Pole. Initial sea trials of Nautilus. Below: Cutaway view of Nautilus (SS 571).



Nautilus first put to sea on 17 Jan 1955 and, under the command of Commander Eugene P. Wilkinson, made the historic signal, "Underway on nuclear power."

On her shakedown cruise in May 1955, *Nautilus* steamed submerged from New London, Connecticut, to San Juan, Puerto Rico, traveling over 1300 miles in 84 hours—a distance that was greater by a factor of ten than that previously traveled continuously submerged by a submarine. It was the first time that a combatant submarine had maintained such a high submerged speed (about 16 knots average) for longer than an hour, the longest period spent submerged by a U. S. submarine, and the fastest passage between New London and San Juan by any submarine, surfaced or submerged. Later she made an even faster submerged passage from Key West, Florida, to New London, a distance of 1397 miles, at an average speed of over 20 knots.

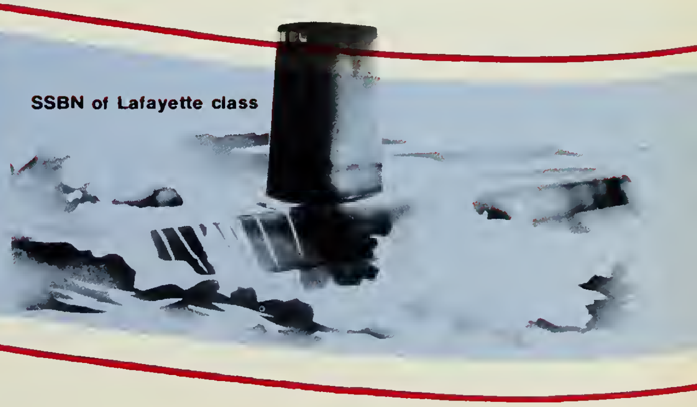
After more than two years of operation and evaluation, the *Nautilus* was refueled in April 1957. On her first core she steamed a total of 62,562 miles, more than half of which was totally submerged. To duplicate this feat, a conventionally-powered submarine the size of the *Nautilus* would have required over 2,000,000 gallons of fuel oil; a train of tank cars over a mile and a half long would be necessary to transport this amount of fuel.

On 12 Aug 1958, the ship completed a history-making trans-Polar voyage from Pearl Harbor, Hawaii, to Portland, England. After diving under the ice near Point Barrow, Alaska, on 1 Aug 1958 she had become the first submarine to reach the Geographic North Pole.

Nuclear submarines which followed the *Nautilus* continued to pioneer new areas of submarine operations, USS *Seawolf*, the Navy's second nuclear powered submarine, operated as an active unit of the Atlantic Fleet, and on 6 Oct 1958, completed a record-breaking 60-day run traveling a distance of 13,761 miles submerged.

USS *Skate*, first attack submarine with a newly designed submarine fleet reactor power plant, commenced sea trials on 27 Oct 1957, and was commissioned a month later. On 24 Feb 1958 she departed New London, Conn., on her shakedown cruise, arriving at Portland, England, eight days and 11 hours later. Her 176-hour submerged transit of the Atlantic Ocean set a new submarine record.

On 11 Aug 1958, *Skate* crossed under the North Pole



SSBN of Lafayette class

while exploring undersea routes beneath the Polar Ice Cap. During this voyage she conducted extensive exploration of underwater routes beneath the Polar Ice Cap.

Another record-making event began on 16 Feb 1960 when USS *Triton* (SSN 586) set out from New London, Connecticut, on a voyage which was to test the cruising range and endurance of the nuclear submarine—a submerged circumnavigation of the world. Following the same route taken by Ferdinand Magellan in 1519, the *Triton* proceeded to St. Peter and St. Paul's Rocks in the Atlantic, crossed the Equator, continued south and rounded Cape Horn, entering the Pacific Ocean. From there she sailed to Magellan Bay in the Philippines, then south through Lombok Strait and rounded the Cape of Good Hope on 17 Apr 1960. She again reached St. Peter and St. Paul's Rocks and proceeded via the Canary Islands and Cadiz, Spain, to the United States. Surfacing off the coast of Delaware on 10 May 1960, she had traveled 36,000 miles completely submerged, in 83 days and 10 hours.

USS *Skipjack* (SSN 585) was another pace-setter. Commissioned in April 1959, *Skipjack* incorporated an improved nuclear propulsion plant, with a shark-shaped hull completely free of protuberances, a sail with diving planes mounted on it and a single screw propeller. This clean design enabled her to sweep all existing submarine speed records, and made her the world's most maneuverable submarine. Most nuclear submarine designs since have been outgrowths of the *Skipjack* design.

The six attack submarines of the *Skipjack* class were followed by 14 *Permit* class submarines and 37 of the *Sturgeon* class; these new classes incorporated improved sonar, weapons and quieting features. Currently, the United States operates sixty-four nuclear attack submarines and has commenced construction of the new SSN 688 class Nuclear Attack Submarine. This class, characterized by high submerged speeds, is designed to be superior to any other attack submarine in existence. The lead ship is USS *Los Angeles* (SSN 688). Currently 23 submarines of this class are in the contract.

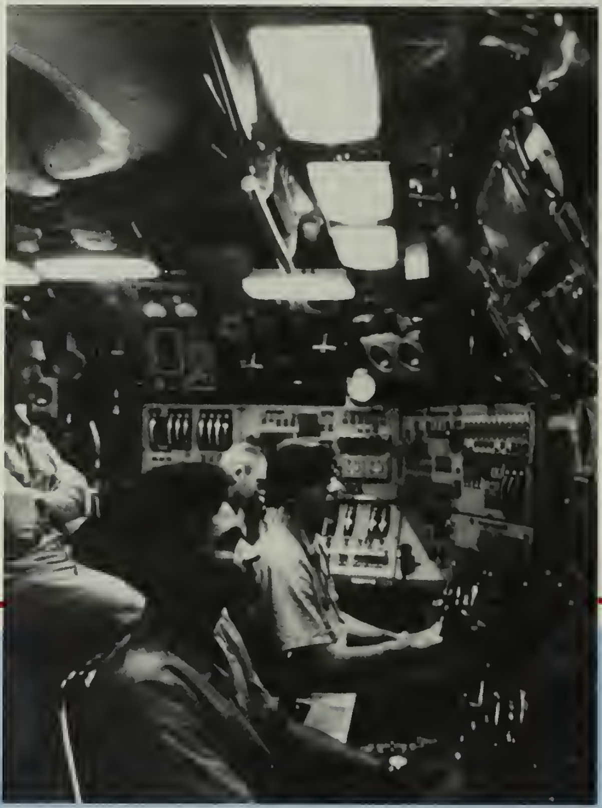
While the *Nautilus* was still undergoing operational testing, the Navy began development of a ballistic missile of intermediate range. Brought from conception to initial operation in five years' time, the *Polaris* Fleet Ballistic Missile (FBM) weapons system was mated with nuclear propulsion to produce a virtually invulnerable missile-firing submarine which today constitutes one of the highest priority elements of the United States' deterrent capability—that is, a deterrent to nuclear conflict.

SSBN of today.

Each *Polaris* submarine can convey 16 solid-fuel, two-stage ballistic missiles powered by solid fuel rocket motors, guided by a self-contained inertial guidance system, and providing a combined explosive power greater than the total of all the bombs dropped by all aircraft during World War II. Nuclear propulsion enables these submarines to remain on patrol for extended periods, hidden beneath the surface of the sea, ready at all times to launch their missiles.

On station, a *Polaris* submarine maintains complete radio silence, receiving radio messages while submerged, but transmitting none lest it give away its location. Each ship has two complete crews, the Blue and the Gold, of about 130 men each. A major change in the Navy's traditional ship-manning methods, the crews alternate on approximately three month-long deployments, providing maximum on-station time for the

Below: Control room of USS Archerfish (SSN 678). Facing page top right: Periscope, and view from periscope, visual link to the surface while sub is submerged. Left top: Ballistic missile submarine, USS Tecumseh (SSN 628). Right bottom: Launch of USS Philadelphia (SSN 690).



submarine, whose endurance is limited only by its personnel.

USS *George Washington* (SSBN 598) was the first ballistic missile submarine to be built. Originally designed to be a *Skipjack*-class fast attack submarine, her partially constructed hull was cut in half and a 130-foot missile section added amidships, due to the urgency of the *Polaris* program. Launched on 9 Jun 1959, she was commissioned on 30 Dec 1959. Six months later, on 20 Jul 1960, she successfully test-fired two 1200 nautical-mile *Polaris* A-1 missiles while submerged off Cape Kennedy, Florida—the first such firing from a submarine. On November 15, 1960, she departed on the initial armed *Polaris* missile patrol, remaining submerged for 66 days, 10 hours.

Four other FBM submarines are included in the *George Washington* Class. Although originally designed to carry the A-1 missile, all five ships have been converted to handle the 2500-nautical-mile A-3 missile.

USS *Ethan Allen* was the first ballistic missile submarine to be designed from the keel up as an FBM submarine. This class is 410 feet long, displaces 6900 tons, and carries A-3 *Polaris* missiles. Since no place on the globe is more than 1700 nautical miles from the sea, the range of the *Polaris* A-3 missile puts virtually every spot on earth within reach of American deterrent capability.

The *Lafayette* Class, third class of FBM submarines, is approximately 425 feet long and displaces approximately 7000 tons. These 31 ships could accommodate the A-1, A-2, or A-3 missile. On 28 Sep 1964 a ship of this class, USS *Daniel Webster*, left Charleston, S. C., to begin her initial deployment carrying the first shipload of the longer range *Polaris* A-3 missile.

In early 1965 came the announcement of the proposal to develop a new missile for the Fleet Ballistic Missile System—*Poseidon*. The growth potential of the ballistic missile submarine launching system has enabled *Poseidon* to fit into the same 16 missile tubes that carry *Polaris*, and like *Polaris* A-3, it is able to reach any spot on earth from its nuclear-powered hiding place. Its increased accuracy, greater payload, and improved ability to penetrate enemy defense make *Poseidon* more effective than *Polaris*.

The Navy is now converting 31 *Polaris* submarines to the *Poseidon* missile capability. All conversions are scheduled for completion by 1977.

Commenting on the effectiveness of the FBM submarine, Senator Clinton P. Anderson, former Chairman of the Joint Congressional Committee on Atomic Energy, stated that "the nuclear propelled ballistic missile submarine marks the closest approach now foreseeable to an ultimate deterrent."

On July 19, 1974, construction of the new *Trident* undersea nuclear weapons systems commenced. The *Trident* submarine will be the largest ever built incorporating the latest nuclear propulsion and submarine design technology.

Before the first nuclear submarine became a fact, the submarine was at best a hybrid. It was, in simple reality, a small surface ship which could submerge for short periods of time. Admiral Rickover's request to investigate the use of nuclear power in submarines has resulted in a true submersible capable of almost unlimited endurance beneath the ocean's surface.

The Blue and Gold crews of the U. S. Navy's strategic submarine force as well as the crews of our nuclear attack submarines are now on station—in the silent "inner space" below the ocean's surface. As the Navy enters its third century of service to the Nation, these ships of the Silent Service stand guard as sentinels of the free world.

Trident, designed to be world's most modern sub

AIR NAVY

In the span of only a lifetime, man went from the ground to the moon.

In our "nothing surprises me" society, most people hardly notice mammoth jets routinely cruising high above their heads. They think it commonplace and not particularly exciting that man-made satellites orbit Earth, men walk on the moon, rockets probe Jupiter's atmosphere and heavily armed jets stand ready to defend our shores against the unknown enemy. Yet, a mere 75 years ago, few men had ever flown.

Back then, metal birds, aeroplanes, winged machines were impractical monstrosities relegated to the status of expensive toys and pipe dreams—nothing more. Few men thought aviation would ever significantly influence their day-to-day lives. It was thought of much like the bicycle and motorcar—nice to daydream about and occasionally tinker with, but it would never replace the horse.

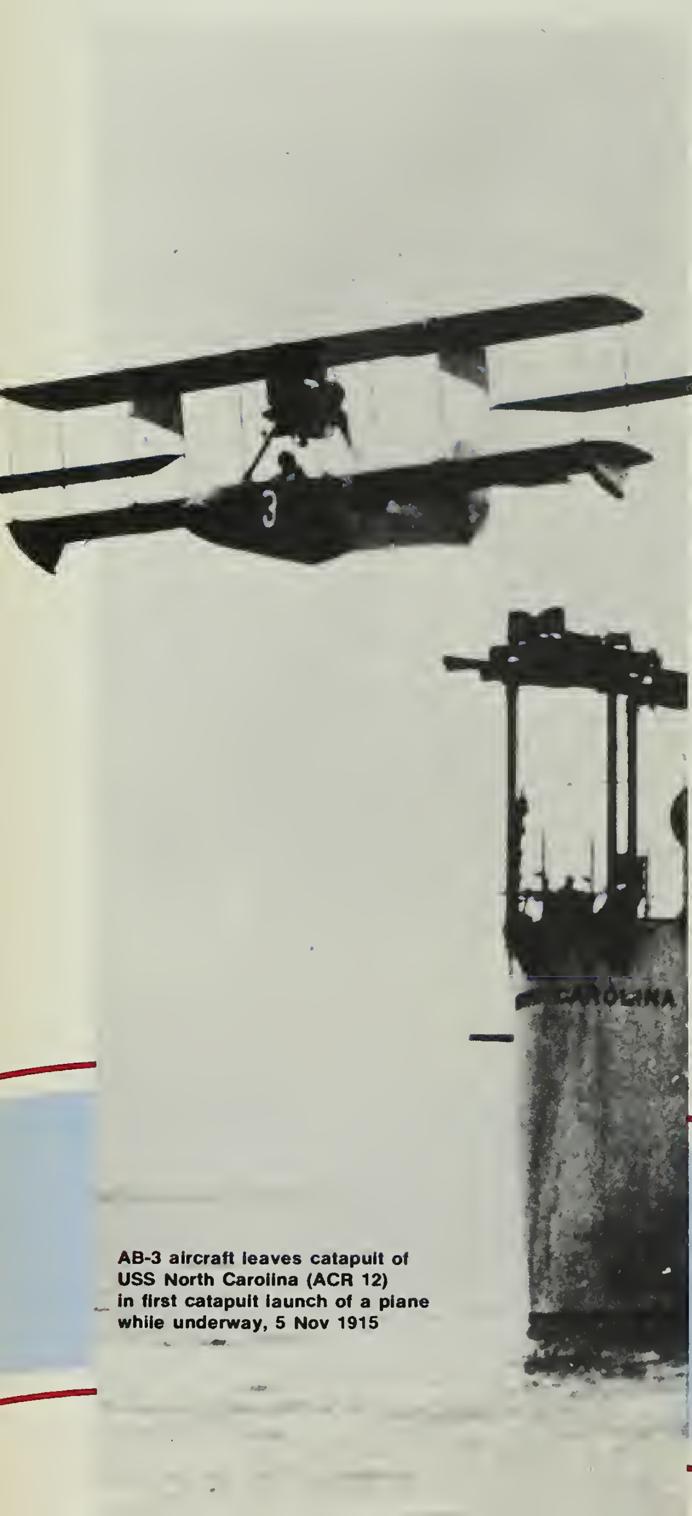
Still inventors and men of vision continued to experiment with gliders and combustible-engine powered aircraft. By the first decade of the 20th Century, men were flying—flying with ever increasing assurance of reaching their destination with each passing flight.

But there were people associated with the Navy back in the 19th Century who had more than a passing interest in the ocean of air above as well as the seas below.

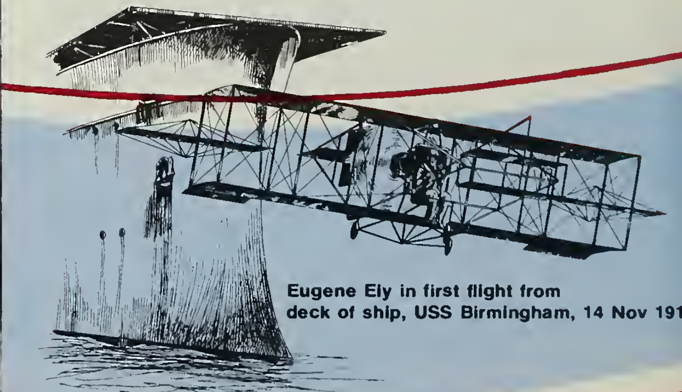
In fact, there was USS *George Washington Parke Custis* of Civil War days which might be labeled as the Navy's first "carrier." Actually, it was a balloon boat from which observation balloons were launched over enemy installations. It was 122 feet long, and its total cost in those days was $150.

As the 19th Century reached its final days, and the unknown Wright brothers were working quietly on their flying craft, the Navy was again looking upward. On 25 Mar 1898, Theodore Roosevelt, the Assistant Secretary of the Navy, recommended to the Secretary that he appoint two officers "of scientific attainments and practical ability" to examine Professor Samuel P. Langley's flying machine and report on its potential for military use.

With the Wright brothers' first flights at Kitty Hawk, N. C., man's first journey into space began. Most people scoffed at the thought of flying as more than a stunt or a sport, but there were others with vision who talked of such possibilities even as crossing the ocean by airplane. One European inventor, a Frenchman, in a treatise published in 1909, discussed the possibility of transoceanic flights. He wrote in part, ". . . flights over the ocean will be made possible by a new type of ship



AB-3 aircraft leaves catapult of USS North Carolina (ACR 12) in first catapult launch of a plane while underway, 5 Nov 1915



Eugene Ely in first flight from deck of ship, USS Birmingham, 14 Nov 191

. . . (whose) deck will be clear of all obstacles, flat and wide as possible . . . (it will) have the aspect of a landing field . . . its speed shall equal that of a cruiser . . . housing of planes will be arranged below deck and planes will have folding wings . . . and to one side there will be the service personnel workshop."

Some foresaw the potential of aircraft serving as an extension of the might and range of a naval force at sea. They were convinced that the day would dawn when airplanes would no longer be used primarily for circus sideshows and cropdusting but instead would transport troops across oceans and be equipped to strike offensively when necessary.

One such man was Navy Captain Washington Irving Chambers, the U. S. Navy's first officer in charge of aviation.

CAPT Chambers' initial involvement was answering letters from air-minded citizens and observing and reporting aviation developments of particular concern to the Navy. What started as a collateral duty soon was a fulltime job and Chambers became a strong supporter of those who wanted to see the sea service add an air arm.

In April 1911, the Office of Aviation in Washington, D. C., consisted of only CAPT Chambers. In May the captain wrote requisitions for two machines made of wood, canvas, bamboo, rubber and metal—two airplanes, the A-1 and A-2. Earlier in the year, a civilian, Eugene Ely, had successfully taken-off from and later landed a biplane on a platform rigged aboard USS *Pennsylvania* (ACR 4), thus demonstrating the feasibility of naval aerial involvement. Convinced that aircraft could enhance the effectiveness of the sea service—and being able to support its convictions—the Navy received authorization to build its air arm.

Chambers was ordered to the Naval Academy in July to help set up an aviation experimental station at nearby Greenbury Point, the Navy's first aviation base. Shortly thereafter, a handful of officers was also ordered to Annapolis ". . . in connection with the testing of gasoline motors and other experimental work in development of aviation, including instruction at the aviation school."

That same month the Navy accepted delivery on its first airplane, the A-1. Called *Triad* because of its three-fold ability to fly and land on either land or sea, the plane was first flown by Lieutenant T. G. Ellyson, the Navy's first aviator. A-1 was followed by A-2 and naval aviation had gotten off the ground.

By October the sea service was ready to try durability flights. Lieutenants Ellyson and J. H. Towers attempted a flight from Annapolis to Fort Monroe, Va. After flying 112 miles in 122 minutes the pair was forced down somewhat short of their goal by mechanical problems. Although a failure in part, the flight paved the way for successful durability tests in the ensuing months.

Under CAPT Chambers' leadership, the Navy's air arm continued to grow. During the next several years there was considerable technological research aimed at perfecting instrumentation and navigational techniques. Other experiments resulted in the development of wind tunnels, better catapults for carriers, recoilless aircraft guns and rigid physical requirements for pilots.

Based on tremendous headway made in a few short years, Secretary of the Navy Josephus Daniels prophesied in 1914 that ". . . the science of aerial navigation has reached that point where aircraft must form a large part of our naval force for offensive and defensive operations." It had become evident that the airplane was no longer merely a plaything of the rich or eccentric, but a vital part of our nation's weaponry.

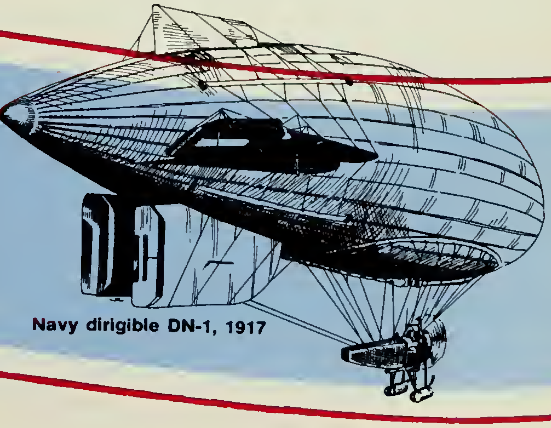
Meanwhile in Europe, the Central Powers were making gains on the continent. Their planes posed constant threats to free nations and their submarines disrupted free world shipping. As the United States was gradually being drawn into the conflict, naval air power was making some advances, but when the U. S. entered WWI naval aviation was still seriously limited in size. There were only 54 aircraft of various types, one air station and only 287 personnel assigned to aviation. The nation had no armed forces or operations abroad.

In spite of its minute size, the air arm proved its value as a supporting unit to surface antisubmarine (ASW) forces. Navy pilots served with Allied units in France and England. The airplane created a new breed of hero, the Ace. Nineteen-year-old Lieutenant David Ingalls, later Assistant Secretary of the Navy (Air), flew a *Sopwith Camel* to become the Navy's first Ace.

By the war's end, aircraft patrol and bombing attacks had logged more than 3,000,000 nautical miles. More than 100 tons of explosives had been dropped on German submarine bases and military targets, while planes damaged or sank 12 of 25 enemy subs attacked. When the U. S. had entered the war there were only 38 qualified aviators and student aviators on hand. By 11 Nov 1918, the Navy's aviation force in Europe alone numbered 1147 officers and 18,308 enlisted men.

Great aviational strides were made during WWI and its end didn't slow the pace of progress. On 8 May 1919, three NC(Navy-Curtiss) flying boats taxied into the bay at Far Rockaway, N. Y., and took off for Europe. Plagued by mechanical difficulties, two NCs

Navy's first plane, Curtiss A-1, 1911



Navy dirigible DN-1, 1917

failed to make it. The NC-4, however, piloted by Lieutenant Commander Albert C. Read, became the first airplane to fly the Atlantic. LCDR Read's message from Lisbon to the President read, "We are safely across the pond. The job is finished."

With transoceanic aircraft a reality, the Navy continued researching the feasibility of rigid aircraft use in their air arm. In 1923, USS *Shenandoah* was launched only to break in two in 1925 killing 14 men during a severe squall. At that time some authorities questioned the usefulness of the airship in relation to the safety factor, since the buoyant force, hydrogen, was highly inflammable.

In spite of some opposition, the Navy continued testing rigid aircraft through the next decade. In 1931, USS *Akron* was launched. She was capable of flying at speeds in excess of 80 knots, had a range of 6500 miles and carried five F-9C fighters within her shell. She crashed in 1933 during a thunderstorm which snapped her rudder control lines. Her crew of 73 was killed.

In 1933, USS *Macon* was commissioned. Two years later she too crashed into the sea and the Navy abandoned research and construction of rigid airships.

However, that research proved fruitful in many ways. Navy researchers worked to perfect the flying boat, land planes and specially designed aircraft carriers. Folding airplane wings were developed making easier stowage aboard carriers possible. Improved catapult systems, air-cooled engines, more accurate bombing sights, controllable pitch propellers and hydraulic arresting gear were also developed and tested.

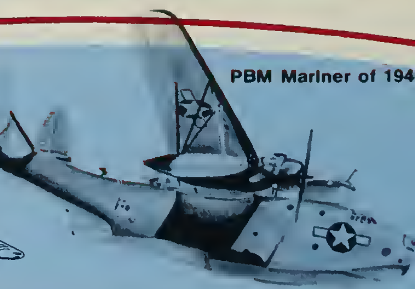
In 1934 USS *Ranger*, first carrier designed as such from keel up, joined the fleet. (Previously, carriers made use of converted cruiser hulls.) Also in the 1930s and pre-war 40s the large carriers *Enterprise*, *Wasp*, *Hornet* and *Yorktown* were commissioned.

These carriers played an important role in the pre-war years. They were used in exercises testing the possibility of launching air attacks from their decks. Naval aviators, during fleet maneuvers, received excellent training in mock attacks on Pearl Harbor. Flying pre-dawn missions from carriers, flyers were completely successful on two separate occasions, theoretically and systematically destroying the U. S. fleet and aircraft there. Fleet commanders were impressed by the flexibility of the

Top: Aircraft on catapult aboard USS North Carolina 1915-1916. Above: VE-7 seaplane leaves turntable catapult of USS Maryland, 1922. Below: Experimental XT5M-Y, dive bomber, 1930. Facing page, top: N-9 Trainer, 1918. Center: F4B-1, 1929. At right: Hellcats aboard carrier, 1943.

The NC-4 made first trans-Atlantic flight in 1904.

F4-3 fighter, 1933.



PBM Mariner of 194

air arm but no one else seemed to pay much attention to the exercises.

Mock attacks gave way to reality near dawn 7 Dec 1941. The Japanese launched a naval air attack on the island base, the first in history conducted solely from aircraft carriers. The attack proved with devastating lucidity that aircraft had become an essential part of naval armament.

Fortunately, no United States carriers were lost at Pearl—*Yorktown*, *Wasp* and *Ranger* were in the Atlantic; *Saratoga* was in San Diego; *Lexington* was about 425 miles south of Midway; and *Enterprise* was 200 miles west of the harbor. The Japanese victory that marked the beginning of the end for the faithful battlewagon set the stage for another victory—a strategic victory fought from carriers—at a place called Coral Sea.

The Imperial Navy had captured island after island in the South Pacific as they advanced toward Australia. It was the Navy's air arm that finally stopped that advance in early May 1942, and set the scene for the turning point of the war in the Pacific. At Coral Sea the two fleets never saw each other—the battle was fought entirely with aircraft launched from carriers.

Lexington and *Yorktown* groups commanded by Admiral F. J. Fletcher launched 93 attack planes against the carriers *Shoho*, *Shokaku* and *Zuikaku*, the latter two both veterans of Pearl Harbor. In a period of five minutes *Shoho* was hit with 10 heavy bombs and 15 torpedoes. *Lexington's* radio crackled with the voice of Lieutenant Commander Dixon of the air group, "Scratch one flattop. Dixon to carrier, scratch one flattop!" Also in the battle, the other two enemy carriers were so badly damaged that their services to the Japanese fleet were lost for weeks.

The U. S. suffered the loss of an oiler, an escort and *Lexington*. Even though there were heavy American losses in terms of tonnage and men, Australia had been saved from invasion.

The turning point of the war came the next month at the Battle of Midway. The Japanese had concentrated on the central Pacific where it was their intention to occupy Midway Island. The four-carrier Japanese task force was met by a U. S. carrier force including carriers *Yorktown*, *Hornet* and *Enterprise*, plus Navy, Marine and Army air units from Midway.

Dive bombers proved to be the nemesis of the enemy carriers. When the battle ended, four carriers, one heavy cruiser and 258 aircraft had been lost by the Japanese. The United States lost 132 aircraft, the destroyer *Hammann*, (DD 412) and aircraft carrier

B2C Helldiver of World War II

OS2U Kingfisher, 1940s scouting plane

PBY-5A Catalina of 1940s

Yorktown (CV 5). In April 1943 another *Yorktown* was commissioned and she continued in the proud tradition established by her predecessor.

Meanwhile in the Atlantic, small escort carriers dubbed "jeeps" were operating with convoys and their aircraft were successfully attacking German submarines as they surfaced to recharge batteries. Limited range of land-based airplanes was no longer a significant factor; distance offered no sanctuary for the U-boat.

Also in use at that time was the airship for escort and observation purposes. Rigid airships had been abandoned in the early '30s but with the introduction of helium the blimp was once again used in the fleet because of its ability to fly high and hover over convoys to spot enemy tonnage.

During that war the fleet of U. S. dirigibles grew from a meager collection of six small airships at the beginning to 15 squadrons consisting of 125 ASW aircraft. Used throughout WWII and again during the Korean Conflict, airships were finally phased out of active use by the Navy in 1962.

Unlike the placid years following WWI, the post war period from 1945 to 1950 was a busy one. The U. S. emerged acutely aware that there could be no major cutbacks in military posture as had been done at the end of WWI—the U. S. had become a nation with many commitments to other countries in terms of trade and protection. The only way this responsibility could be discharged was by the maintenance of a strong and ready Navy.

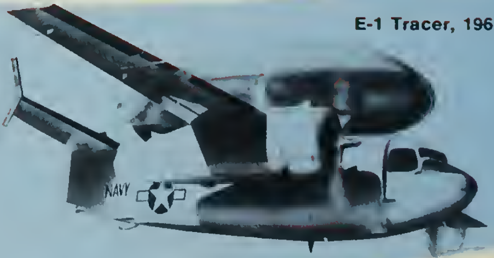
Naval researchers continued to develop new ships—specialized ships—and new planes capable of providing swift aid to allies in a world of uneasy peace. All naval aircraft were redistributed into patrol, attack and fighter squadrons and featured the most advanced radar and sonar systems.

Jet aircraft were perfected. In June 1948 a squadron of FH-1 *Phantoms* qualified for carrier operations aboard USS *Saipan* (CVL-48). Carrier flight decks were redesigned to facilitate launching and recovery of jets.

When North Korea attacked south of the 38th parallel in June 1950, the Navy was called upon for close air support to knock out bridges and block enemy supply routes. Navy jets flew from carriers for the first time

F6F Hellcat, WWII fighter

F4H1 Phantom, 1961



E-1 Tracer, 1964

in a war situation. Unlike WWII, the enemy didn't have the capability of striking our carriers, so pilots launched their *Corsairs* and *Banshees* on the first sustained ground support missions in history.

Also in Korea the helicopter came of age. First studied and developed in 1942 when the Navy procured four *Sikorskys*, the ugly duckling choppers spotted for artillery, flew emergency supply runs and took part in direct combat duties. Later the helo was used as a cargo transport between ships during underway replenishment, search and rescue missions and ASW exercises. Korea was the catalyst and testing ground for that aircraft and many other innovations in current use.

Facing page top: SB-2Cs are shown on mission during World War II. Center: CH-46D Sea Knight helicopter, 1974. Bottom: Fish-eye lens view shows flight quarters aboard USS Saratoga (CVA 60) in 1969. Above: SH-2D Seasprite helicopter hovers over guided missile cruiser USS Wainwright (CG 28). Below: The contours of this F-4B Phantom are reduced to a blur as it takes off from USS John F. Kennedy (CVA 67).

The 1950s were a time of change. By the end of the decade most operational aircraft in the sea service's attack and fighter arsenal were jets. More and more angled-deck carriers were authorized and new deck edge elevators allowed simultaneous takeoffs and landings. The hurricane bow and the familiar designations CVA (attack carrier) and CVS (ASW support carrier) became commonplace. The F-4 was also developed and currently is the fleet's leading fighter plane even though it is being slowly phased out by the new F-14.

During the Vietnam era five new attack carriers joined the fleet, including the world's first nuclear-powered carrier *Enterprise* (CVAN 65). In the process of revamping, many of the old warriors were retired.

Vietnam was a different kind of war, a war in which the Navy's role was ever changing. The Navy used both new and old aircraft—OV-10 *Broncos*, propeller-driven *Skyraiders*, attack planes like A-4 *Skyhawks* and A-7 *Corsairs*, fighter planes like F-8 *Crusader*, and various support aircraft for ASW, early warning and advance communication links.

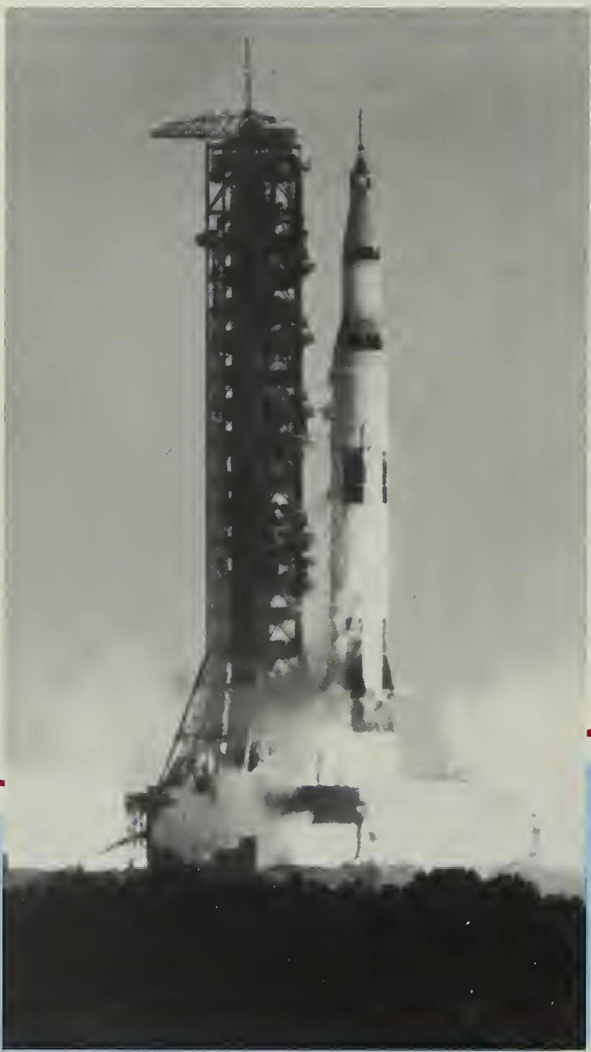
Even while the Navy was operating in the Southeast Asian conflict, there was still time to continue the space probes that had started in 1961 when Alan Shepard became the first American in space. The sea service was actively involved in all *Mercury*, *Apollo* and *Skylab* missions including the first walk on the moon in 1969. Before America's first 10 years of manned space exploration had ended, five of the six men to walk on the surface of the moon had been trained as naval aviators.

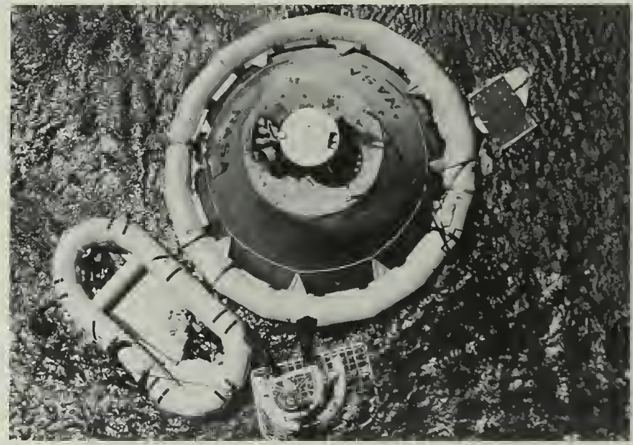
In Vietnam a peace was finally achieved. In the 60 odd years since a wooden, bamboo, canvas flying-machine became the Navy's first aircraft, a whole new world has come into being—a world with new crises, new confrontations and yet, new hopes for lasting peace. Until peace is realized, mobile and flexible use of naval air power will continue to guarantee America's free use of the seas and the freedom of her people.

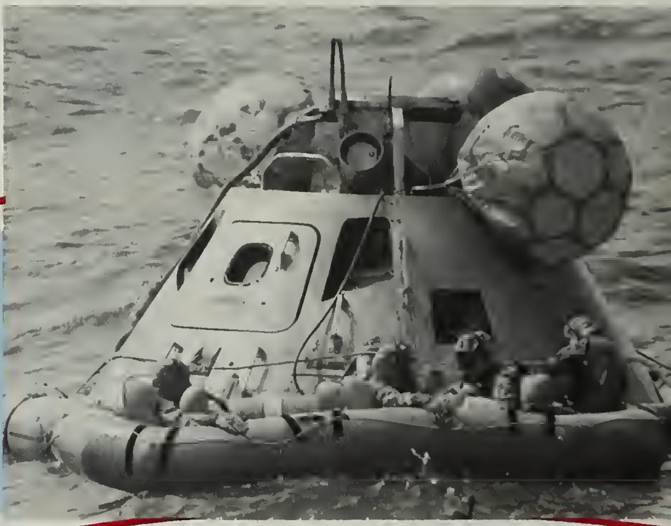
In this Bicentennial year, we cannot reflect on 200 years of naval aviation history, yet we can be extremely proud of her accomplishments in the years since her official birthday, 8 May 1911, and the vision of others in the years before.

—JO2 Dan Wheeler

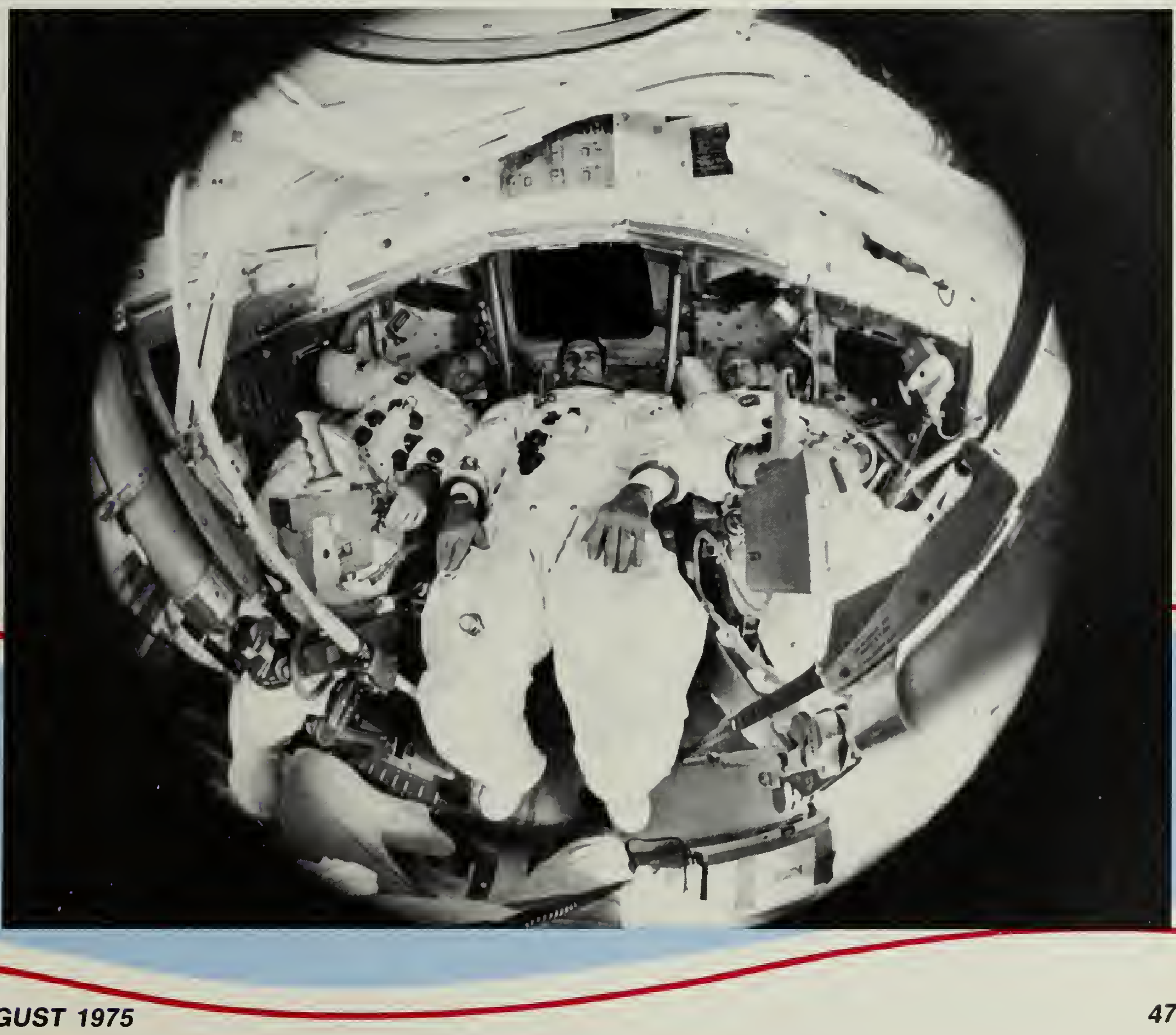
STRATO-LAB
ONR
U.S. NAVY

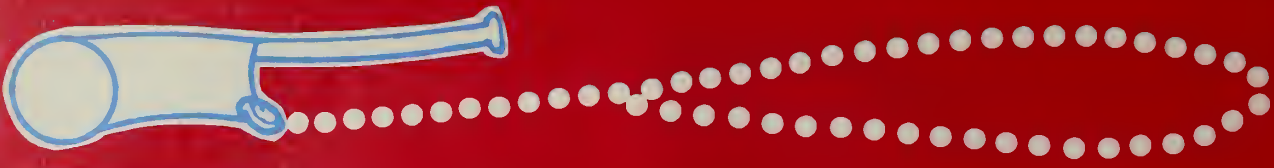






Facing page, top left: Two naval observers set unofficial altitude record of 76,000 feet in this spherical aluminum gondola in 1956. Bottom: Apollo/Saturn space vehicle lifts off, on 16 Jul 1969, for nation's first manned lunar landing. Astronaut Neil Armstrong, who was the first man to walk on the moon, received his initial training as an aviator in the U. S. Navy. Left: Astronaut Alan B. Shepard, Jr., now a rear admiral, is recovered after first successful American flight into space on 5 May 1961. Center left: UDT swimmers practice Apollo recovery. Bottom left: Apollo 12 astronauts and swimmers practice recovery before second lunar landing. Above: U. S. Navy pararescue men stand on flotation collar used to keep Gemini 12 spacecraft afloat, 1966. Right: ASW Squadron 4 recovery helicopter hoists Astronaut Young aboard after Apollo 10 mission. Below: First All-Navy crew to make successful moon landing, Captains Conrad, Bean and Gordon, in spacecraft checkout before flight in November 1969.





200 Years of Piping the Boatswain's Call

The next time you hear a boatswain's pipe signaling an impending call for all hands to quarters for muster, just think that this "music" has been heard by sailors of our Navy for the last 200 years. It may not be beautiful music—but take note that you'll be listening to the most ancient and distinctive nautical sound effect of them all. In fact, the oarsmen on ancient Greek and Roman galleys are said to have timed their strokes either to a pipe or flute. And during the days of the Crusades, a pipe was employed (in the English Navy) as a signal for the crossbowmen to come up on deck for an attack.

The present form of the boatswain's instrument (properly termed a "call") was established some time during the 16th Century. After defeating Scotland's Andrew Barton, England's Lord Howard took a pipe from the fallen body of his foe, and when he became Lord High Admiral, he officially adopted it. In time it came to be used for passing of orders as well as salutes to distinguished visitors—as it is today.

In the days of sail there were certain very definite and practical uses for the pipes, some of which have since passed into history. Men high on the royal and t'gallant yards, for example, could hear its piercing call rising from the deck above the howl of the winds. In those windship days, merchant as well as naval vessels carried piping boatswain's mates, but the pipe has long since ceased to be a feature of anything but a man-of-war.

Let's clarify a couple of terms before we go any further. We said earlier that the instrument itself is, properly, a "call." However, the various "words" which are passed by the call are also known as calls So, to avoid confusion, and at the risk of offending purists, the instrument will be called hereafter by its popular misnomer—boatswain's pipe.

Here, culled from the files of ALL HANDS, are some interesting items about the boatswain's pipe—including some pointers on how to play a call yourself.

Chances are if you've served aboard a Navy ship for any length of time—say 24 hours or so—you've probably already heard a medley of sounds destined to become among the most familiar of your Navy career. As a matter of fact, there have no doubt been occasions when you've harbored a barely suppressed desire to tell "that guy up on the quarterdeck what he could do with his licorice stick."

If you're like most of us, while you've got a pretty good idea of the "why for" and the "when," you're probably not too clear on the "how's it done."

Read on, if you will. A more thorough knowledge of the procedures involved in sounding a boatswain's pipe is bound to increase your "musical appreciation" when next you hear those dulcet tones. And who knows—you might be inspired to master the art yourself. You wouldn't be the first. Plenty of Navymen—mostly deck or ordnance ratings, to be sure, such as gunner's mates, torpedoman's mates and quartermasters, but more than one yeoman, radioman and what have you—have done just that, and take pride in their ability to handle the pipe as well as any boatswain's mate around.

Let's start off with a definite premise—that there's much more involved in piping a call properly than simply picking up a pipe and applying lung power at the correct end.

To begin with, all of the distinct and different sounds are achieved through, and affected by, several methods of cupping the pipe in the hand. More on this later.

Then there's the pipe itself—a more complicated affair than you might imagine. The ship's First Lieutenant is provided with an original issue of pipes, which usually don't last very long. Boatswain's mates, it seems, have a habit when being transferred of packing off with their pipes still attached to their persons. Most of them, however, eventually prefer to buy their own particular model, oftentimes with an ornamental design worked around it.

G.I. or tailor-made, though, a pipe won't sound worth listening to until it's tuned. Pipes are stamped out when manufactured, and both the hole in the top of the bowl and the aperture in the reed next to it (the pee) are nearly always misshapen. The pee must be cut off clean at an angle, then the hole filed down until the blast of air from the pee is exactly split by the hole's outer edge. (A bosun's mate who is an expert on the subject says that the hole usually requires some filing.) A nail file is ideal for this operation, you'll find. It has a fine grain, and is thin enough to file down the bowl without also cutting the pee.

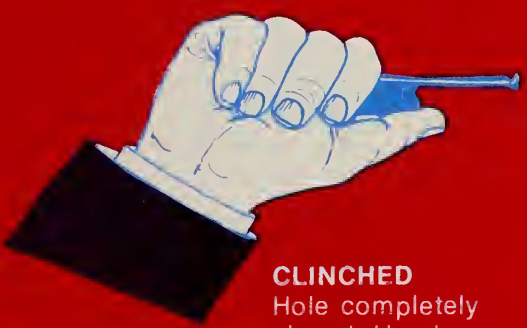
Once this considerable filing down of the bowl is accomplished, a straw shoved through the reed should split on the far edge of the hole. When this occurs, the pipe is about right. Occasionally, however, there may be a gap between the bottom of the pee and the bowl. This will cause a hissing sound of escaping air which will interfere with the clearness of the call. A drop of solder in the gap will remedy that condition.

We mentioned before that there was more to sounding the boatswain's pipe than might at first glance seem apparent. The various calls, for example, have been reduced to paper, somewhat in the fashion of musical scores. Now these "scores" are fairly simple and easy to figure out just by looking at them, as you can see by a glance at the accompanying illustrations. But—remember these different hand positions we referred to a while back?

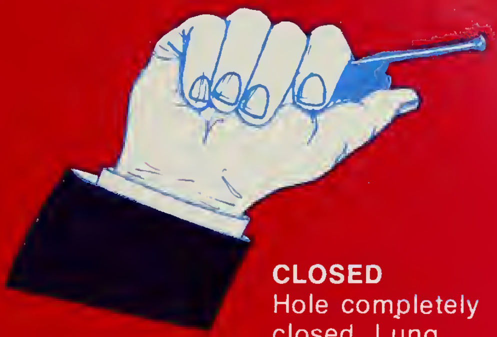
It would be a complete waste of time, for instance, to attempt to sound a sustained note with the pipe held in either the curved or closed position. Those are used exclusively as starting or stopping positions, or as intermediate steps in rising from the open to the clinched position or vice versa. Then too, just about the toughest part for a beginner, we're told, is learning to sound the high, shrill scream which issues forth when the pipe is properly held in the clinched position. To achieve this, you must squeeze hard, and blow hard.

An added thought—you might be wise to stage your first practice session down in the bilges somewhere or ashore on leave or liberty, lest the OOD or non-music-loving shipmates take a notion to fling you bodily out of the compartment.

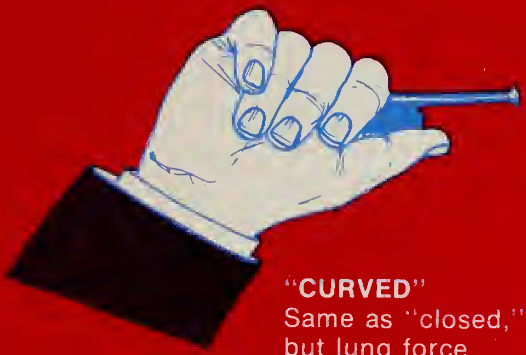
At first you probably won't produce much but a noise resembling the sound of escaping steam, but don't let that discourage you. Before long you'll be "piping up" as well as the saltiest BMC. At least you'll think so.



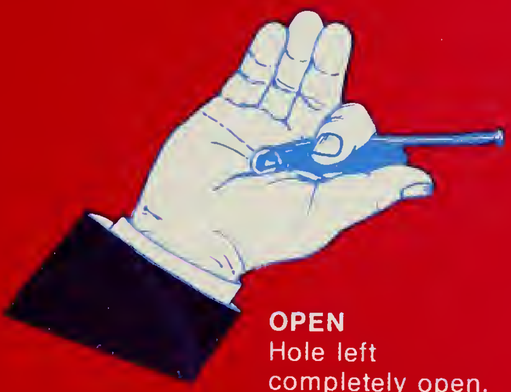
CLINCHED
Hole completely closed. Hand tightly squeezed and lung force is very strong.



CLOSED
Hole completely closed. Lung force strong.



"CURVED"
Same as "closed," but lung force is moderate.



OPEN
Hole left completely open. Lung force strong.

The Bosun's Pipe and Calls Aboard Ship

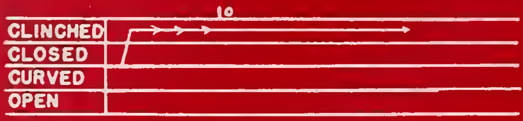
READING THE SCORE

FOUR POSITIONS OF THE HANDS are indicated on the four spaces of the musical staff.

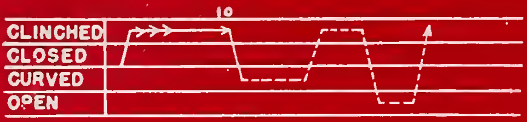
STRAIGHT LINE indicates a smooth note. This is made by simply raising or lowering the air pressure, as is done with an ordinary whistle.

DOTTED LINE indicates a rattled note, like that of a policeman's whistle. You get this by rattling your tongue against the roof of your mouth.

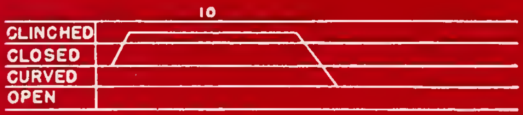
PASSING THE WORD—This call is the prelude to every word passed aboard ship. Its purpose is to get the attention of all hands to the announcement about to be made.

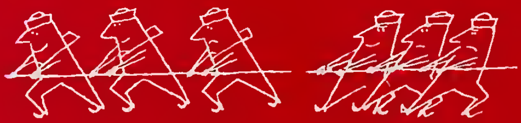


PIPE DOWN—The call "pipe down" consists of "passing the word" and a long, 10-second "veer," ending in a short, sharp peep in the clinched position. It is piped as "secure" from any all-hands function. It is also piped immediately after the bugle call "tattoo," just before word is passed to turn in. (For "Veer" call see next column.)

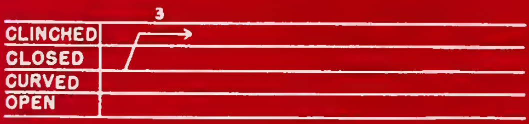


HOIST AWAY—"Hoist away" is piped after "set taut," to start a power hoist or a "walk away" with boat falls or tackles.

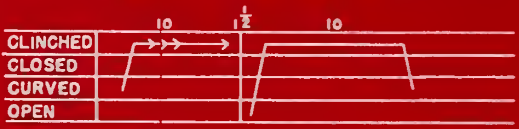




HAUL—"Haul" is the pipe equivalent of "ho! heave! ho! heave!" by voice, when the gang is heaving together on a line instead of walking away with it. The low note means "get another purchase," and the high note means "heave!"

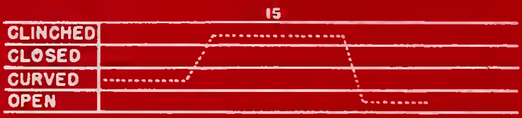


ALL HANDS—"All hands" is piped as a general call to any event in which all hands are to participate—to battle stations, for example. It is sounded after the bugle call, "reveille," before word is passed to heave out and trice up. It is also the first part of the call which pipes the crew to chow.

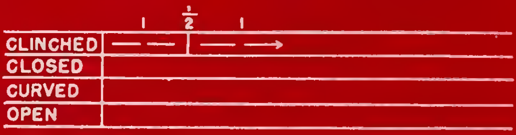


VEER—This is the call sounded by the boatswain's mate of the watch to fall in side boys for tending the side. One veer calls two boys; two veers, four; three veers, six; and four veers, eight.

"Veer" also means "ease (or slack) away," or "walk back." It is sounded continuously during slacking, and the man slacking or lowering away controls his speed in proportion to the rapidity of the rise and fall of the sound.



CALL MATES—Before the days of PA systems aboard ship, every word passed was by word of mouth of the boatswain's mates, fore and aft. The word was given to the boatswain or boatswain's mate of the watch, who sounded "call mates" to get the boatswain's mates together. As they drew near from different parts of the ship, they answered repeatedly with the same call. When they got the word they dispersed fore and aft to sing it out at every hatch. The call is two short, shrill peeps in the clinched position, repeated once. You won't find much use for "Call mates" nowadays.



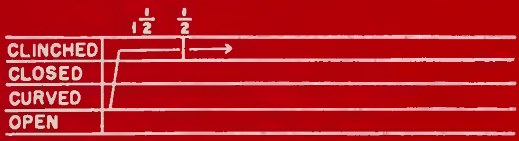
BROKEN LINE indicates an undulating (wavy) note. Made by arching the tongue (as in sounding the syllables "TOE HEE, TOE HEE"), causing the sound to undulate smoothly, continuously and at equal intervals.

FIGURES ON TOP OF THE SCORE indicate the duration of notes and intervals (rests) in seconds.

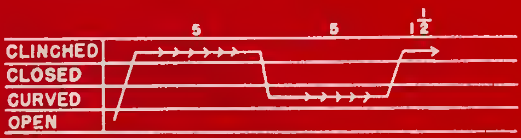
ARROWHEADS indicate full breath impulses or blowing hard. You'll notice they are nearly always placed on notes sounded in the clinched position where you need a real blast to sound at all.

INTERVALS, OR RESTS, are marked with a vertical line (|) with the number of seconds above it.

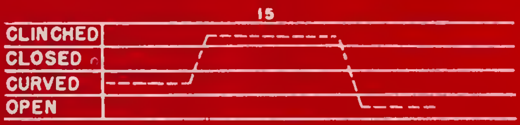
STAND BY—The meaning of "stand by" is obvious. Piped after "all hands," it means "all hands stand by" for some evolution or maneuver. This is also the call for "set taut," meaning to take the slack out of falls or tackles before "hoist away."



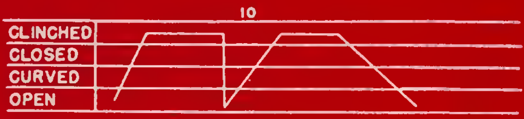
BELAY—A short "belay" means "avast heaving." A long "belay" means "avast heaving and make her fast."



HEAVE AROUND—This call, piped twice, means "heave around" on the capstan or winch. Piped once, it means "mess gear." It is also part of the pipe for "mess call."



BOAT CALL—"Boat call" is piped to call away a boat, and also to pipe a division to quarters. The call is lengthened in proportion to the seniority of the boat called. In other words, you hold it longer for the gig than you do for a motor whaleboat. After you pipe the call, sing out, "AWAY the gig (barge, No. so-and-so motor lunch, etc.) AWAY!"

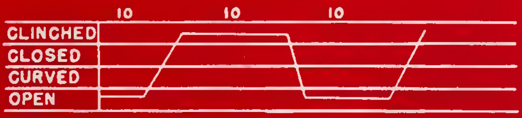


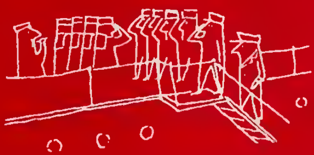
PIPING THE SIDE—This is the aristocrat of all the calls on the boatswain's pipe. It really consists of two of the calls shown on the score. The pipe "alongside" is sounded so as to finish just as the visitor's boat makes the gangway. During this pipe the side boys and boatswain's mate stand at attention but do not salute.

The pipe "over the side" starts just as the visitor's head appears at quarterdeck level. Side boys and boatswain's mate salute on the first note, and drop from salute on the last one. Right-handed boatswain's mates, have argued since time immemorial over whether it is proper to salute left-handed in this situation. Some of them have ruined their dispositions trying to learn how to sound their pipes in their left hands. It may be said here that a boatswain's mate MAY salute with his left hand when piping the side.

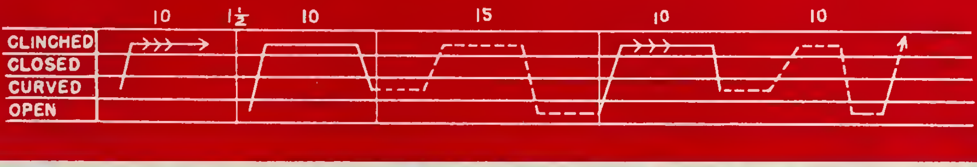
Saluting procedure is reversed when a visitor is leaving. "Over the side" is piped as the visitor passes the boatswain's mate on his way to the gangway, and side boys and boatswain's mate salute on the first note. They drop from salute on the last note, and remain at attention while "alongside" is sounded. This last call begins as the visitor's boat curves away.

Get a good lungful of air before you start a side pipe, because etiquette requires that it be as long drawn out as possible. The more side boys the visitor rates, the longer the notes of his side pipes should be sustained.





MESS CALL—The pipe "mess call" is the longest of the lot; it should cover not less than a minute. It consists of "all hands," a long "heave around," and a long "pipe down," in that order.

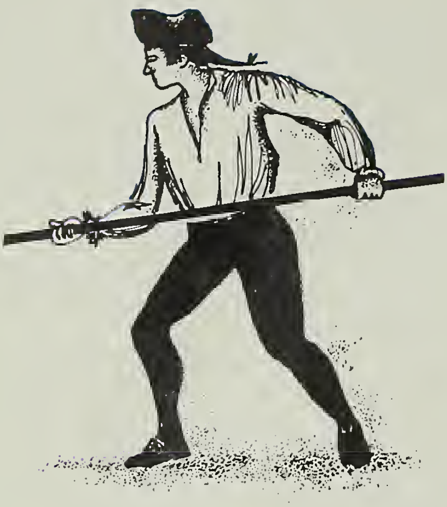


Two Centuries of Change and Progress

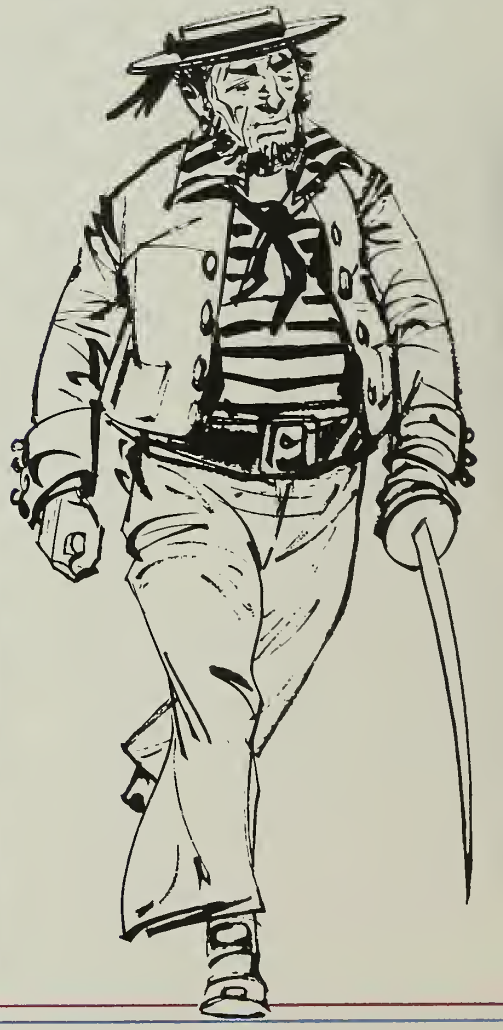
EVOLUTION of N

The Navy uniform, developing over a period of 200 years, is a living tradition, and like all living traditions it has experienced a continuing series of changes. Each one of the changes has undergone the tests of time and, sometimes, of controversy.

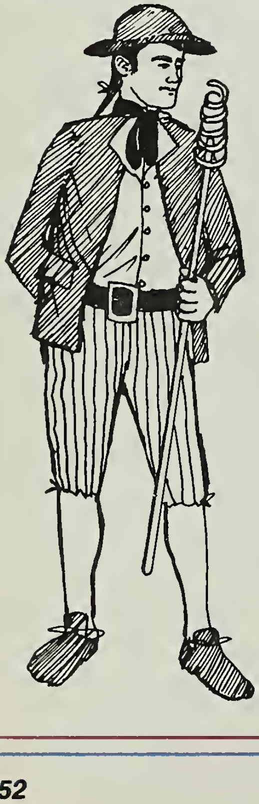
Many people think of the uniform of the song, "bell-bottom trousers, coat of Navy blue," as the unchanging uniform of two centuries, but as can be seen from the pictures on these pages the uniform has gone through many changes over the years, each one adapting itself to changing needs or the trends of the times. The changes have not always come easily, and that is



ENLISTED MAN OF 1797



ENLISTED MAN OF 1812



GUN CREWMAN OF REVOLUTIONARY WAR

OFFICER AND ENLISTED OF 1812

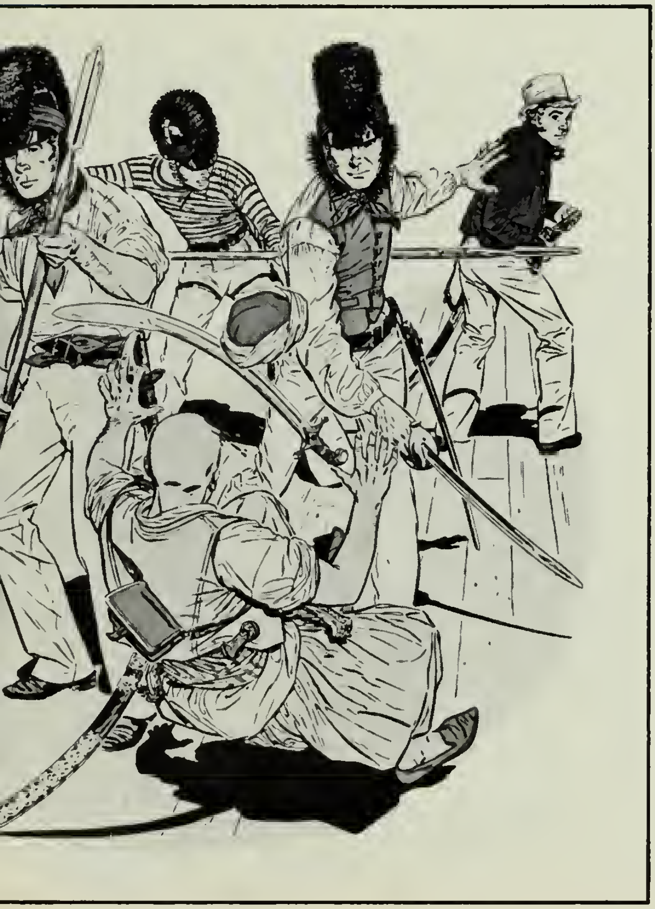
AVY UNIFORMS

good, because past customs and traditions, if they are worth anything, have been built on sound foundations.

But tradition survives as part of a way of life, and it must adapt itself to the changing ways of society. So it has been with the Navy uniform. The flared bell-bottoms first came into being because they could be more easily rolled up when swabbing the decks, and more easily removed if the ship went down in a storm or in combat.

Most items of the uniform came into being for reasons such as this, while others had their origins in earlier customs that had become obsolete but were retained for decorative reasons.

OFFICER AND ENLISTED OF 1815



Let's take a look at the uniform down through the years.

When the Navy was just getting underway 200 years ago, there was no prescribed uniform for ships' crews. They wore whatever clothing they had when they enlisted, or a uniform the skipper had decided would be appropriate and kept aboard in his "slop chest." More often than not, the early seaman's uniform consisted of bell-bottom trousers, a frock (or jumper), short jacket, vest and narrow-brimmed hat (straw in summer, tarred canvas or leather in winter).

Chronologies say that the Navy adopted its first uniform on 5 Sep 1776, but it did not go so far as to spell out the items of wear by the enlisted members of the crew.

One of the earliest recorded descriptions of enlisted men's clothing comes from the personal papers of Commodore Stephen Decatur. While in the frigates *United States* and *Macedonia*, in the first decades of the 1800s, his sailors wore "glazed canvas hats with stiff brims, decked with streamers of ribbon, blue jackets buttoned loosely over waistcoats and blue trousers with bell-bottoms."

In 1817, Secretary, of the Navy Benjamin W. Crowninshield issued the first rules covering enlisted men's clothing to be covered in Regulations of the Navy. These specified that all Navymen in summer would wear a white duck jacket, trousers and vest; in winter—a blue jacket, trousers, red vest, yellow buttons and black hat.

The "Regulations for the Uniform and Dress of the Navy of the United States," first Uniform Regulations, were approved in February 1841. These specified: "The outside clothing of petty officers, seamen, and ordinary seamen, landsmen and boys, for muster, shall consist of blue woolen frocks, with white linen or duck collars and cuffs, or blue cloth jacket and trousers, blue vests when vests are worn, black hat, black handkerchief and shoes, when weather is cold; when the weather is warm, it shall consist of white frock and trousers, and black or white hats, as the commander may direct, having regard to the convenience and comfort of the crew, black handkerchiefs and shoes. The collars and breasts of the frocks to be lined or faced with blue cotton cloth, stitched with white thread or cotton."

These regulations generally describe enlisted men's uniforms since the beginning of the U. S. Navy. What changes were made affected rating insignia, color combinations, decorations and material; the basic idea of bell-bottoms and jumpers persisted—until just recently.

Since 1841, some description of enlisted men's uniforms has been carried in all uniform instructions. In spite of this, a great deal of individuality appeared until the end of the Civil War. Each sailor then had to make his own uniforms and, naturally, each wanted something a little different than his shipmate.

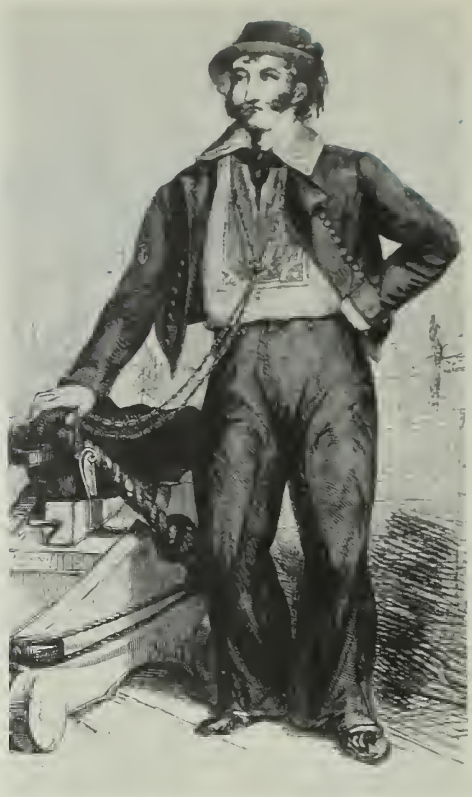
In 1852 new uniform instructions stated that "Thick blue cloth caps, without visors, may be worn by the crew at sea, except on holidays or at muster." This was the forerunner of the famous flat hat.

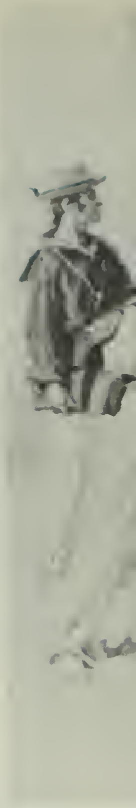
Seven years later, in 1859, the white duck cuffs and collars were removed from the blue frock, making the enlisted winter uniform all blue. The winter uniform was bell-bottom trousers (some with buttoned front flap, others with button fly and slash pockets), jumper, jacket, black shoes, neckerchief and flat hat. The summer uniform was white bell-bottom trousers, long-sleeve white jumper with blue collar and cuffs, white flat hat with black band, black shoes and neckerchief.

After the Civil War, some of the individuality of the home-mades was lost when, in 1866, Uniform Regs were issued. Two stars were added to the jumper collar and white piping was added to the sleeves and collar to indicate rank. Petty officers, seamen and first class firemen had three piping stripes; ordinary seamen and second class firemen had two stripes; landsmen, coal-heavers and boys had one stripe.

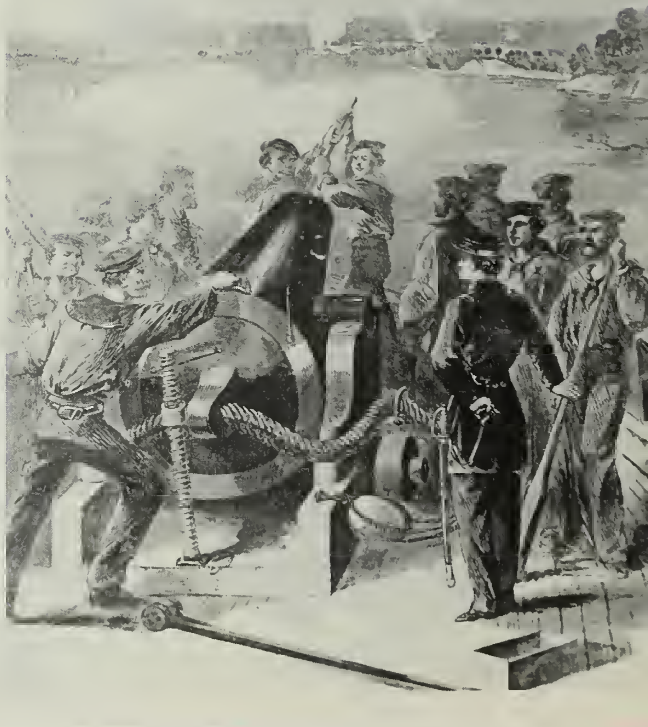
These regs (1866) also specified that masters-at-arms, yeomen, surgeon's stewards and paymaster's stewards—all petty officers—wear "blue jackets with rolling collars, double-breasted; two rows of medium-size navy buttons on the breast, six in each row. Slashed sleeves

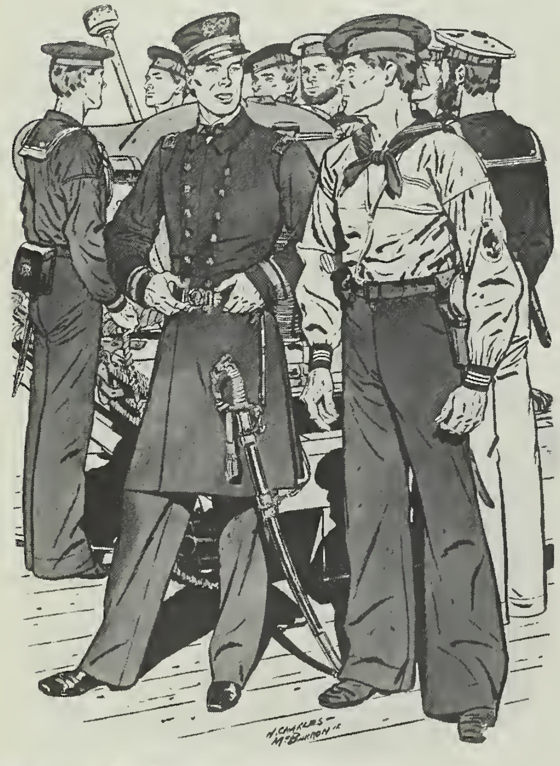
BOATSWAIN'S MATE OF 1836



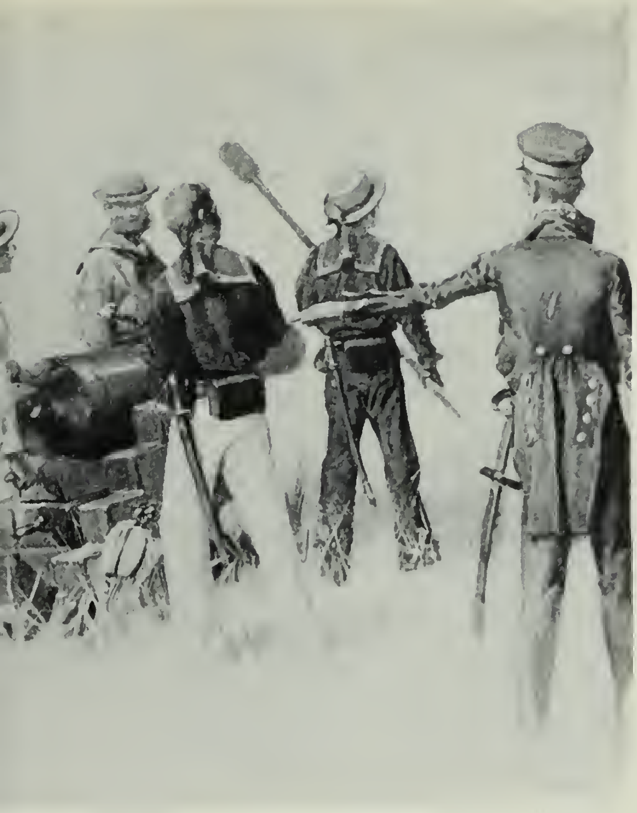


GUN CREW OF 1863




H. CHARLES McBARRON JR.

OFFICER AND ENLISTED SERVICE DRESS OF 1862



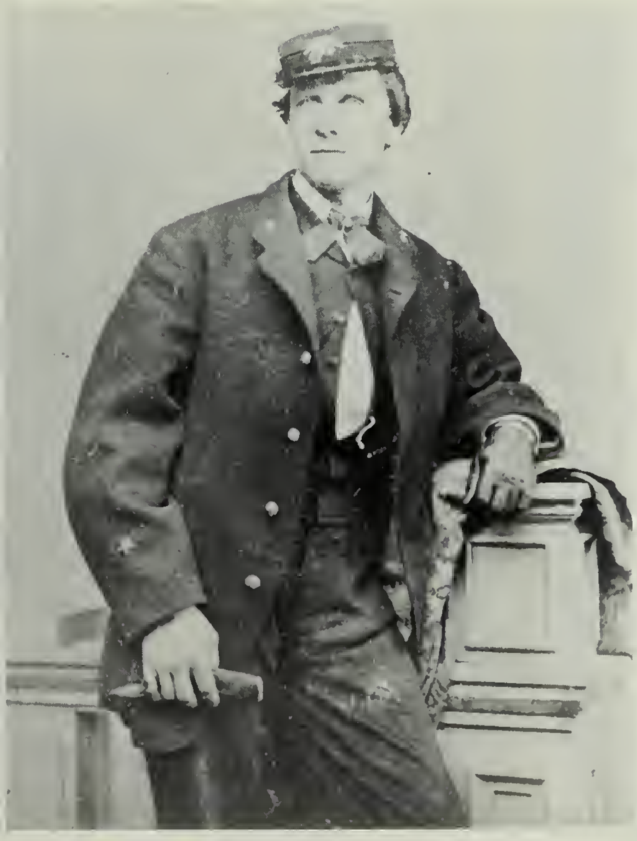
OFFICER AND ENLISTED, ABOUT 1841

or cuffs, with three small navy buttons. Plain blue caps with visors." They were allowed to wear white cotton or linen shirts (in place of duck frocks with turned-over collars) and uniform vests, with six small navy buttons. The regs also gave them straight trousers for the first time. The MAA wore a star and anchor on the cuffs of his double-breasted coat. This was the first step in giving the yet-to-be-established chief petty officer rate a distinct uniform. In 1874 this coat for principal petty officers was changed to a single-breasted, sack coat similar to the type then worn by officers.

Collar piping was eliminated in 1869 and replaced by stitching of "white thread—two rows, one-eighth of an inch apart, the first row close to the edge." The stars and cuff piping were retained. In 1876 the piping was again changed to three rows of three-sixteenths-inch-wide tape on the jumper collar. It was purely decorative—the sleeve piping indicated a man's rate.

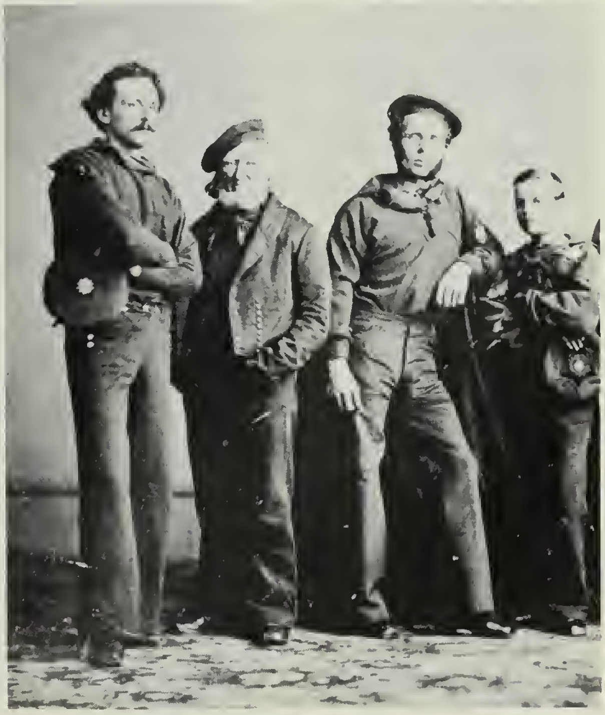
The 1869 regs are also notable because they prescribed the first enlisted working uniform. Until this time, sailors wore their oldest dress uniform to work in, now they were permitted to wear overalls and a jumper of white cotton duck. This was probably because of the dirty work created when the Navy converted to steam and coal.

Distinctive first, second and third class petty officer rates were established in 1885, and differentation came in the 1886 Regs. First class POs wore a dark blue or white duck, double-breasted sack coat similar to officers . Other enlisted men wore jumpers with the blue one tucked into the trousers and the white one hanging loose. The collar and cuffs of the white jumper were covered with thin Navy-blue flannel. Both jumpers had piping and stars on the collar and piping on the



ACTING ENSIGN OF 1866

USS HARTFORD'S RACE BOAT CREW, ABOUT 1866



cuffs. Three rows on the cuff now indicated second and third class petty officers and seamen first class; two stripes second class seamen; and a single stripe seaman third class.

The pea coat, first mentioned in the Regs. of 1841, became a regular part of the enlisted uniform in 1886. Aside from the sack coats of petty officers, it was the first overcoat to be made a part of the uniform since the short seaman's jacket prescribed in the 1841 regulations.

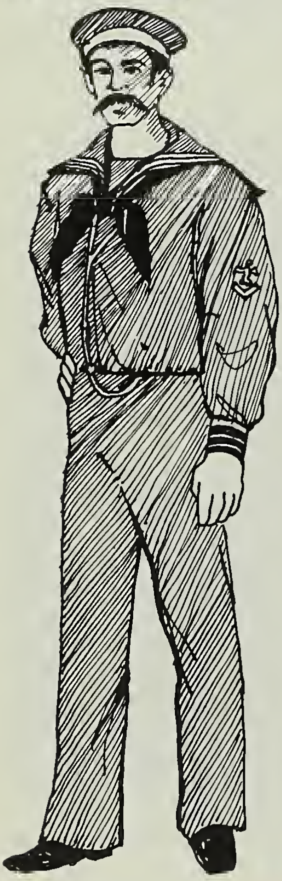
By 1886 a new type of white hat had also been introduced. It had a spherical crown with a narrow, turned-up brim. By the end of World War I, this hat changed into the familiar "dixie cup" white hat. The 1886 Regs also included a description of enlisted men's shoes.

Eleven years later, in 1897, enlisted men's shoes were standardized as follows when SecNav John D. Long issued this directive: "Shoes—for all enlisted men; of black calfskin; both high and low; heels broad and low; soles broad and thick; strongly curved on outside and straight inside; thin leather lining; the high shoes to have full tongue stitched watertight to the flaps; shoe strings to be of strong leather." Until this time, sailors wore whatever shoes they had; in earlier days they might have gone barefoot.

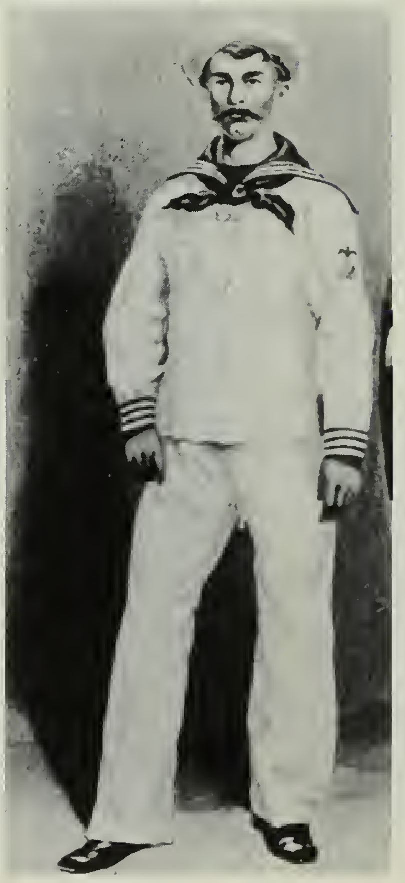
The uniform worn in 1886, and the 1897 shoes, were essentially what the U. S. sailor wore when he went off to fight WW I.

From WW I until shortly after the end of WW II, few changes were made to enlisted uniforms. The blue

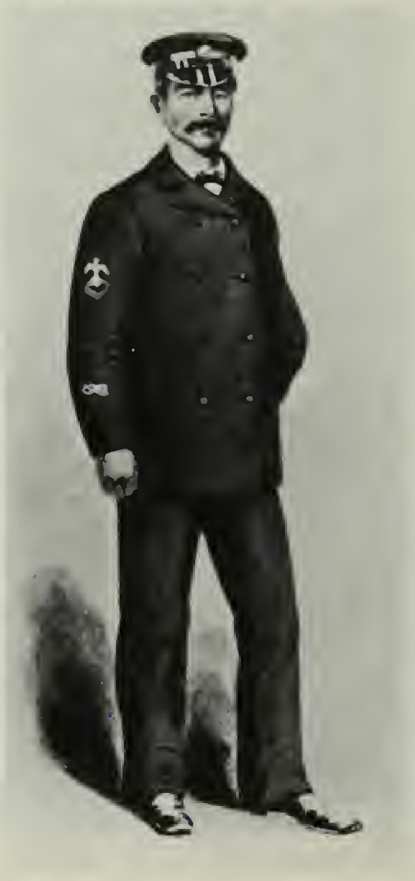
ENLISTED MAN OF 1886



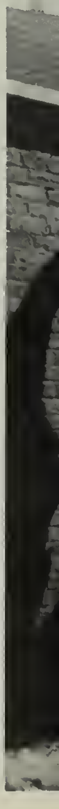
ENLISTED MAN IN WHITES, 1886



ENLISTED MAN OF 1886

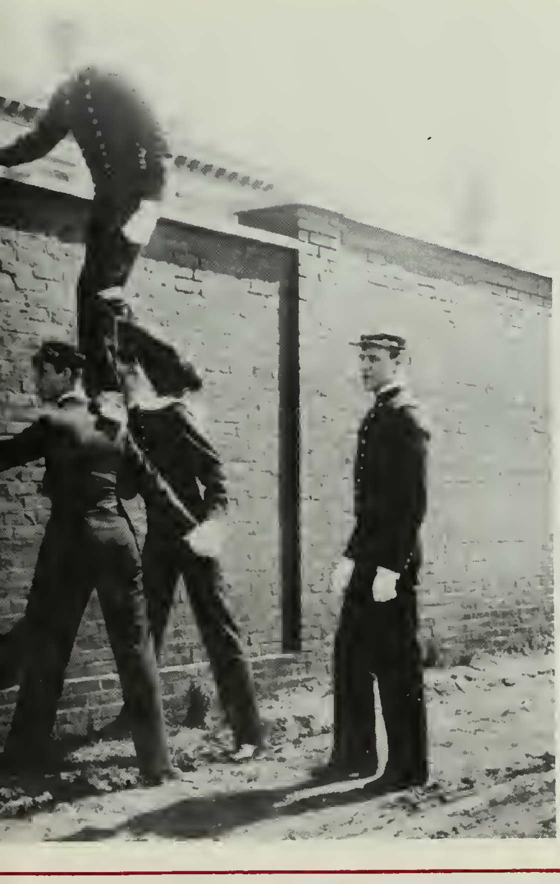


NAVAL



STARBOARD WATCH ABOARD USS BOSTON, 1888

MIDSHIPMEN OF 1893



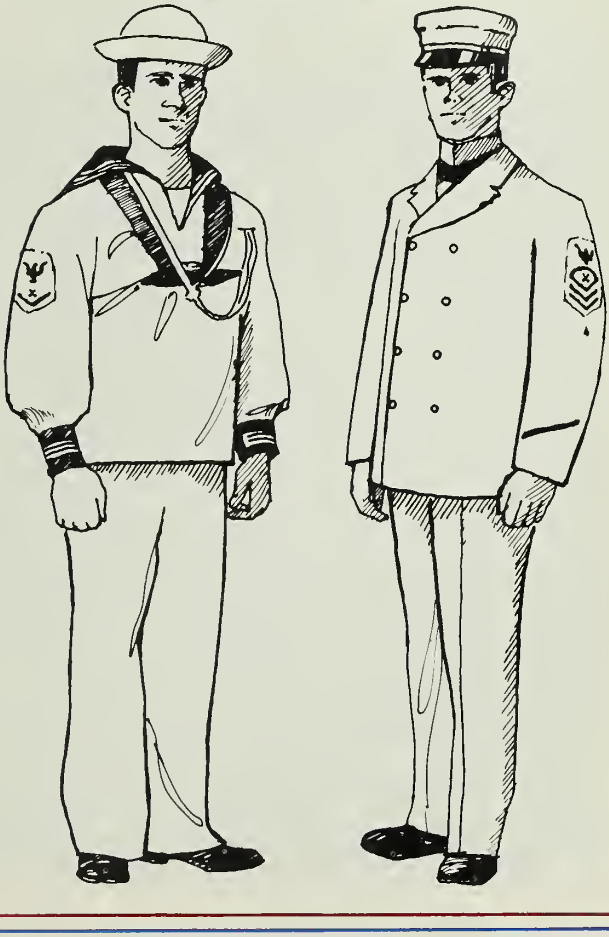
jumper was now worn outside of the trousers, some changes were made to rating badges (all rates were switched to the left arm) and cuff piping as a rate indicator was discontinued with the establishment, in 1948, of the seaman stripes on the left arm *vs.* the right shoulder stripe. Cuff piping's only function became decorative. The neckerchief grew a bit longer, too. One major change was that the white jumper was completely white, rather than having blue collar and cuffs. The blue wool was causing problems in manufacture, comfort, laundering, shrinkage, lint and fading.

Toward the end of World War II, a lot of people talked about the need to modernize the enlisted man's uniform. Many recommendations were made in favor of the officer-type uniform and, as a result, the Permanent Naval Uniform Board developed one. But the time was not yet right for a one-uniform Navy. There was much resistance to the idea just as there were many proponents of the change. The uniform fell flat.

In 1948, and again in the late 1950s, the old 13-button pants came under fire and were to be replaced by bell-bottomed trousers with a zipper fly and slash pockets. That idea never got into full swing either. It was *not enough* of an improvement and so it was *too much* of a change. Such a howl arose from the Fleet that the old 13-buttons were "better fitting and more Navy looking" that the zipper was abandoned. But the demand for *some* change continued.

In the early 1950s, a proposed cuffless blue jumper was given a short test; a new type neckerchief, similar

ENLISTED MAN AND CHIEF OF 1905



to the existing one but prerolled, was tried; and the old pre-WW II white jumper with blue collar and cuffs, improved so it could be laundered without shrinking, was again put back on the drawing board but died there. None of these changes caught on. Navymen stubbornly hung onto their beloved bell-bottoms.

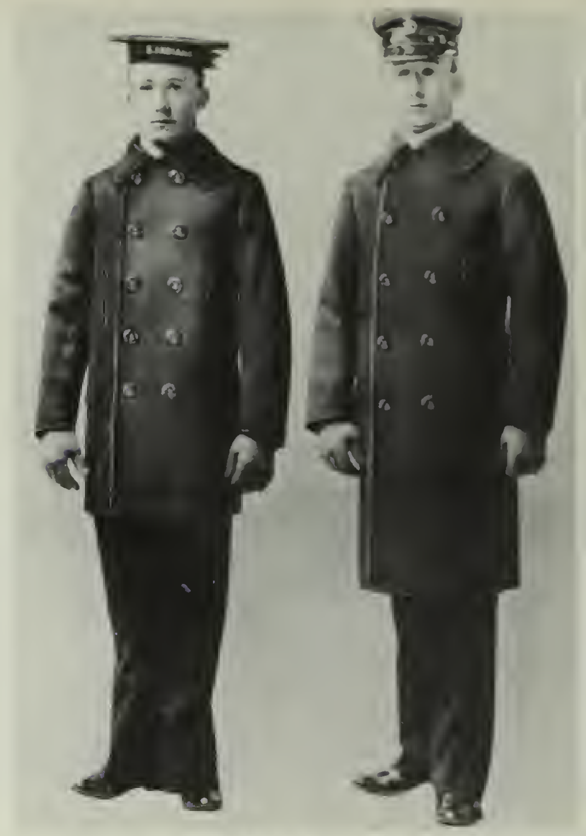
All was not rejected, however. The short-sleeve white shirt was accepted in 1959, and a new style double-breasted raincoat for E-6s and below was brought in.

More changes were on the way. In 1963, the blue flat hat went out and tests were again begun on a suit-type enlisted uniform when a poll showed that 70 per cent of Navymen below CPO wanted a change. There were many different opinions among that 72 per cent as to what they wanted, some said a CPO-type uniform, others wanted only a "wider choice of material for the present uniform." A thousand PO1s and PO2s in both sea and shore commands were given a uniform for testing which was almost identical to the new one now coming in. The only difference was the cap device—a miniature fouled anchor, yet easily distinguishable from the CPO's. Tests also included white and khaki uniforms in addition to the blue one.

As might have been predicted, the new uniform stirred up a beehive of controversy on all sides. For one thing, a sizable number of uniforms were involved. For another, we were not yet sufficiently far into the era of the new fabrics, such as wash-and-wear, polyesters, etc. In the end, the idea was shelved.

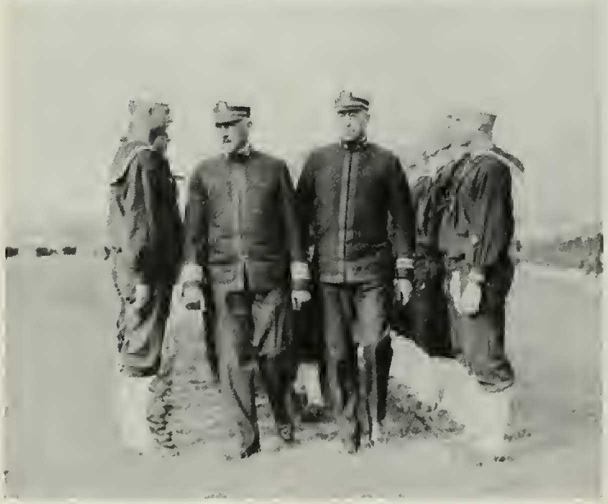
But the new uniform question never really ended. The push for change continued and the suit-type uniform was always in the running. In mid-1969 another new uniform was tried, again a suit-type, but with a single-breasted, three-button jacket. The hat was a CPO type, but with a blue cloth-covered bill, a silver rating device (chevrons and "crow") and the words "U. S. NAVY" in gold across the front of the black hatband.

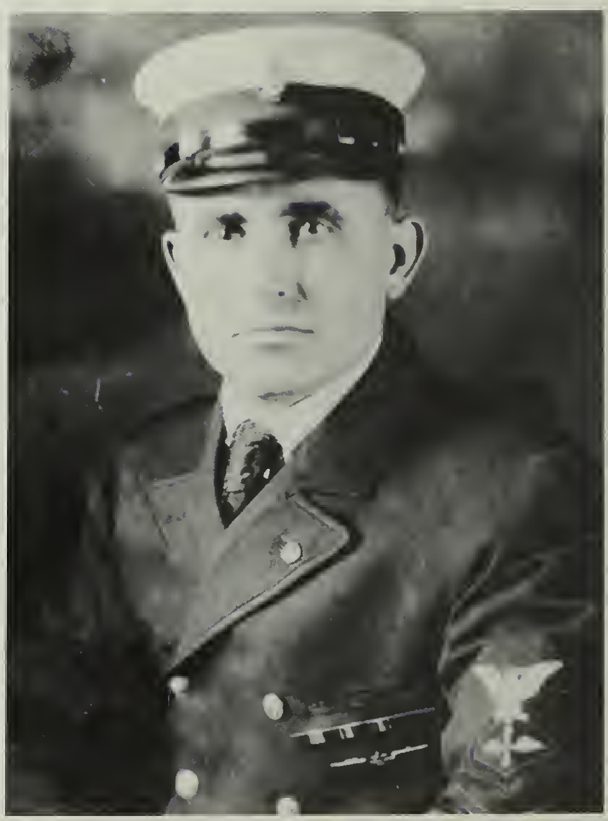
Tests continued, with various modifications being made. In December 1970 a poll was taken among 4000 Navymen of all ranks and rates. Those queried were scientifically selected so their views would represent the majority of Navymen. Results showed that 80 per cent of all enlisted men E-6 and below preferred a



ENLISTED MAN AND CHIEF, ABOUT 1905

OFFICER AND ENLISTED OF 1918

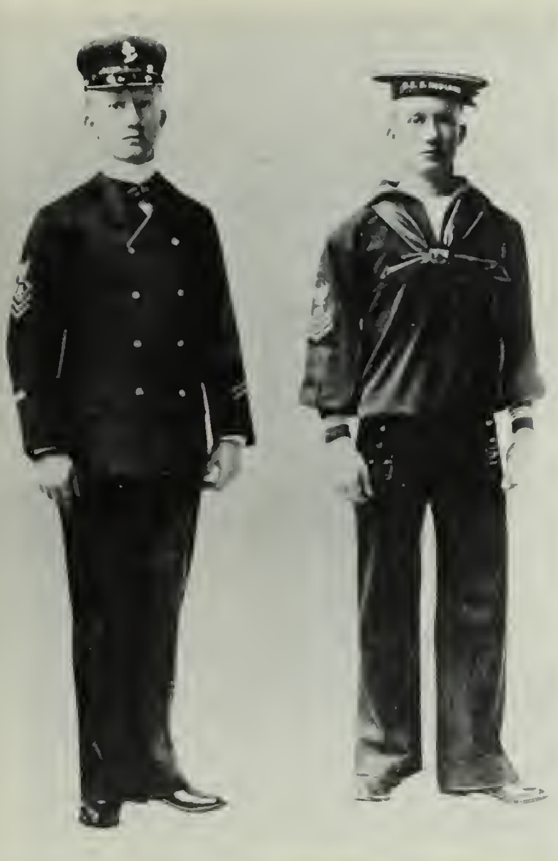




CHIEF MACHINIST'S MATE (AVIATION) OF WW I coat-and-tie style. Since 92 per cent of the officers and chiefs who were queried had a favorable opinion of their dress blues, the Navy decided to use it as the basic uniform for all men to symbolize one organization striving for common goals. At the same time the blue uniform was changed, the white CPO-style trousers were also authorized.

After questions such as what type of buttons, rating badges, cap devices and the like were cleared up, the uniform was sent to the Fleet for testing. It finally reached its finished form and recruiters were authorized to wear it in November 1972. PO1s followed in January 1973 and the rest of the enlisted men in July 1973.

The transition period had begun, but the uniform controversy was still not over—and in a society where controversy is a way of life it can be expected to continue. There are some who still insist that "it ain't like the old Navy,"—which it ain't. Or is it? After all, it's the uniform that has been worn by a sizable component of the sea service, officers and chiefs, with only modest changes for more than half a century. Understandably, the nostalgia for the old bell-bottoms and jumper uniform will continue to exist with many. Surveys indicate, however, that the majority of sailors like the new uniform and agree with what one PO2 wrote ALL HANDS in 1959, during that period's suit-type uniform uproar: "I wonder how long it's been since [the chief] has had to wear the miserable uniform issued to enlisted men below E-7. Surely, it hasn't been so long that he has forgotten what it was like.



CHIEF PETTY OFFICER AND BOATSWAIN'S MATE FIRST CLASS, ABOUT 1905

WAVES OF 1945

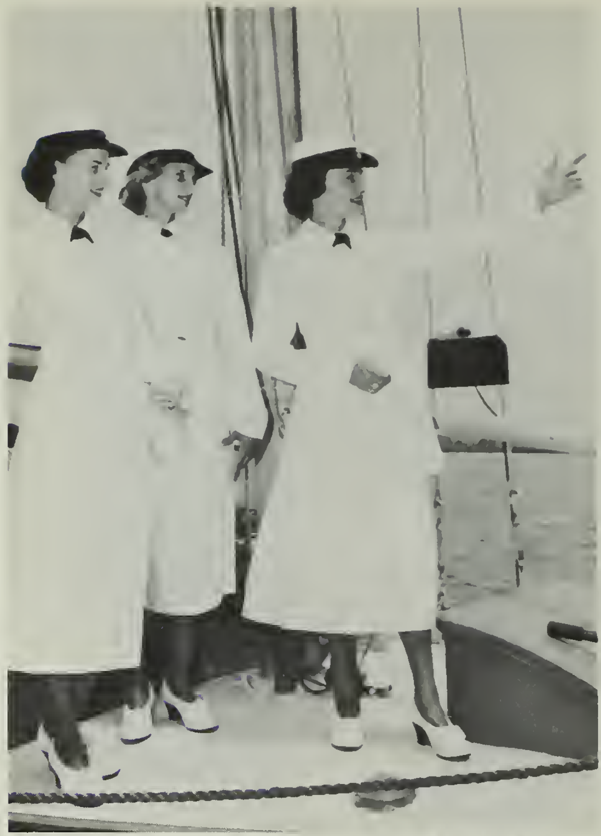
"Doesn't he remember how absurdly uncomfortable it was (and I cannot be convinced that it *is* comfortable) and how maddening it was to find a place for such common items as cigarettes, lighter, comb, etc.?"

He asked the chief (mythical, though collective) how he felt about the times he's been in a restaurant and had to reach to get his cigarettes from his *sock*, "of all places;" and the time he's had a cab waiting while he ran into a drugstore to buy something and had to dig a quarter "out of that watch pocket" while the cab meter ticked away; and the times he had dinner at a friend's house and "as he bent over to sit down found that 'cute' neckerchief dunked into the gravy."

And so it goes. After 200 years the enlisted Navyman is getting a completely new dress uniform. But it wasn't something that somebody dreamed up overnight. As you have seen, the discussion of a coat-and-trousers type uniform goes back some three decades, and probably was a subject for taffrail talk long before that. In the photo files of ALL HANDS are pictures of enlisted men wearing test uniforms 15 years ago that look mighty like the uniform that went into effect Navywide as of 1 Jul 1975. As we said, the Navy uniform is a living and changing tradition.

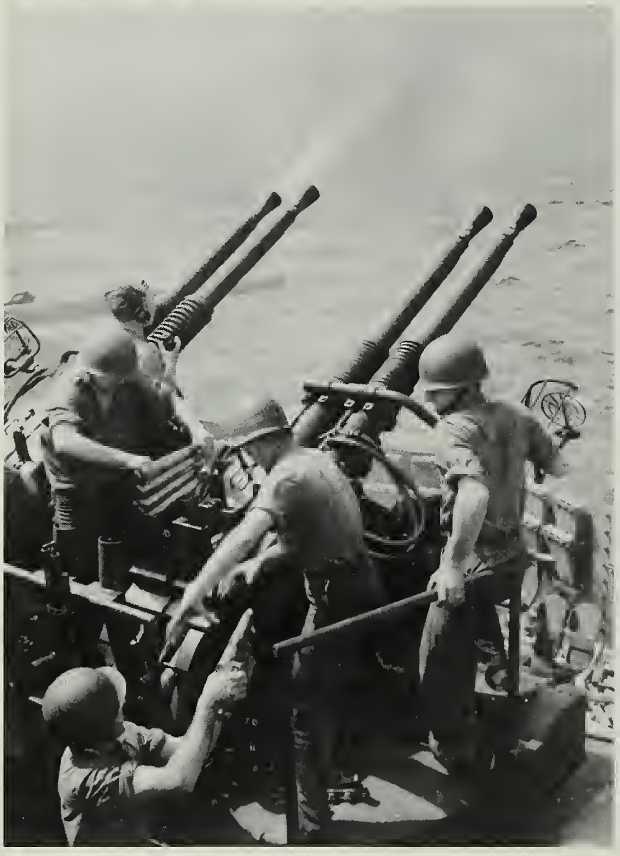
—JO1 Tom Jansing

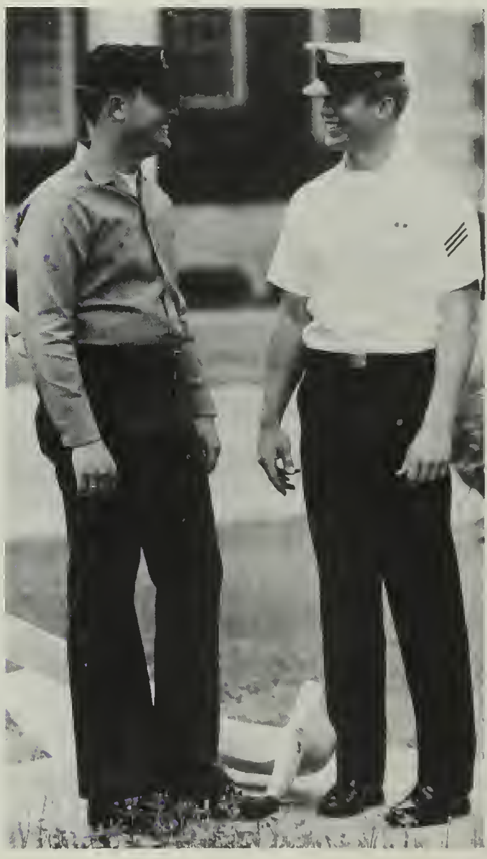
Uniforms of Today's Navy: From left below: A sailor in the blue working uniform with modified buttoned-down-front shirt chats with shipmate wearing the new summer blue uniform for enlisted personnel. Center below: The basic uniform for all in today's Navy, from seaman to admiral. Far right: Sonar technician 1st class takes over job as boatswain's mate of the watch, wearing a bosun's pipe over his new uniform.

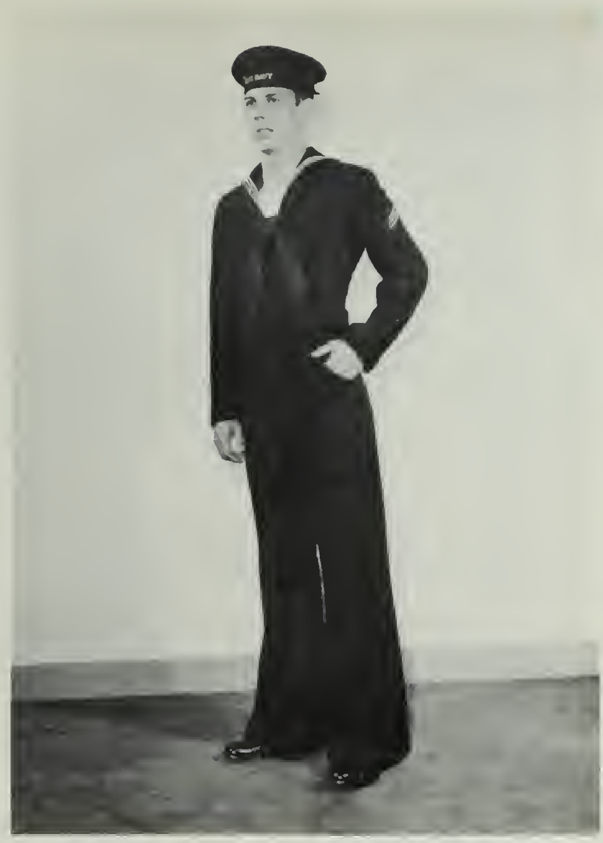


WAVE RECRUITS OF 1952

USS HORNET GUN CREWS OF 1945







DRESS BLUE UNIFORM OF 1950

Uniform Traditions

For the Navy history buff, here are some notes on the origins and traditions that grew up around the early enlisted uniform.

- The jumper collar: Sailors of old wore their hair braided in a pigtail which was kept stiff with grease or tar. To protect their clothing they wore a piece of cloth tied around their neck. Eventually, this piece of cloth was sewn to the jumper as a collar.
- Piping and stars: Piping was first introduced as decoration on the uniform and later used as a way of indicating enlisted rates. The stars on the jumper collar were purely decorative. Before piping and stars became regulation, jumper collars were often ornamented according to personal taste. Fanciful designs appeared in early days. When white tape and stars were used, the style was admired and copied by others, later becoming regulation. Some believe the three stripes were adopted to commemorate Admiral Lord Nelson's three great sea victories—Copenhagen, the Nile and Trafalgar—but there is no proof to substantiate this belief.
- Neckerchief: Some say that sailors' black neckerchiefs were worn in mourning for Admiral Lord Nelson, but there is nothing to substantiate this story. Actually, it dates back to earlier times. After the collar became attached to the jumper, sailors needed something else to protect the collar from their hair grease and tar. A large handkerchief was used because it was easier to clean than the whole jumper. Some sailors were a large, black handkerchief tied around their necks to catch perspiration. When rules of smartness and appearance were introduced, seamen's hair was cut shorter and the pigtail was no longer possible. The black neckerchief then became a decoration to be worn under the collar and secured with a square knot in front.
- Bell-bottom trousers: No one knows for sure why sailors first wore this style pants, but there are at least three logical reasons: (1) They are easily removed if one goes overboard; (2) they cover one's boots easily to keep rain and spray from running into them; (3) they are easy to roll up above the knee while scrubbing decks. Also, as we all learned in boot camp, they hold a lot of air if the legs are tied off at the ends, and can be used as an emergency flotation device.
- Trouser flap with 13 buttons: Buttoned flaps were probably adopted because they could be opened quickly with one yank to get the pants off if one went overboard. Most take the number of buttons to represent the 13 original colonies, but this has never been proven to be true.

When bell-bottomed trousers were authorized in 1817, they had only seven buttons in front. When the broadfall front was enlarged in 1894, six more buttons were added, making a total of 13. It has been asserted the additions were made for symmetry of design.

- The trouser string tie: An old, purely utilitarian device to allow the beltless pants to be adjusted for fit.

USS Constitution

A Living Tradition

A veteran warship with an illustrious history, USS *Constitution* presents a noteworthy example of a living tradition for spectators reviewing America's heritage during the 1975-1976 Bicentennial celebration.

Although still undergoing a major face-lifting scheduled for completion in 1976, "Old Ironsides" reopened for general visiting on 14 Mar 1975. The ship was closed to on-board visiting in April 1973 when she entered historic Drydock One at Boston Navy Yard to begin a $4.4 million overhaul.

Drydock One, or the John Quincy Adams Drydock, was one of the first two drydocks ever built in the United States. In 1833, USS *Constitution* had been the first ship to enter the drydock for rebuilding. On 24 Apr 1974, she became the last vessel to leave the drydock before Boston Navy Yard finally closed its gates.

During this latest drydock period, *Constitution* had much of her underwater hull planking replaced with white seasoned oak. Following her refloating, she was moored at Pier One in Boston where rehabilitation is being completed in stages.

On 1 May 1974, the second phase of *Constitution's*

Above: Billethead (carving used in place of figurehead) on bow of Constitution in War of 1812. Right: Modern Navy's Sea Chanters, famed members of the Navy band (in uniform of 1820) visit "Old Ironsides."

overhaul began. At this time, Portsmouth (N.H.) Navy Yard assumed responsibility for completion of the work in 1976. The time involved here allows for seasoning of the wood and Bicentennial visiting.

In the course of her meritorious career, "Old Ironsides" has blockaded ports and been blockaded herself but always emerged as the victor. In three wars, this ship provided the basis on which the young American Navy would become "a seapower of which to be wary."

It all began in 1794 when *Constitution* and five other frigates were authorized by the youthful U. S. Congress. America had actually been without a Navy ship for a period of nine years. During this time, the young nation's economy depended upon, and was nurtured by, seaborne commerce with peoples around the world. Those American merchants who traded in the Mediterranean found it harder and harder to conduct business because of attacks by Barbary (North African) pirates who knew there was no U. S. Navy to stop them.

Finally, on 27 Mar 1794, Congress passed a bill to build six frigates to protect American Mediterranean commerce from the Barbary pirates. *Constitution* was one of the ships authorized. With her keel laid down that same year, *Constitution* was designed by Joshua Humphreys and Josiah Fox to be powerful enough to defeat any enemy about the same size, and fast enough to outsail a stronger opponent.

Built by Colonel George Claghorn at Edmond Hartt's Shipyard in Boston, *Constitution's* live oak, red cedar, white oak, pitch pine and locust came from states ranging from Maine to South Carolina and Georgia. The live oak came from the sea islands off Georgia; her masts from Unity, Maine; and the pine for her decks from South Carolina. Some of the canvas came from Rhode Island; New Jersey provided the keel and cannonballs. Sails, gun carriages and the anchors came from Massachusetts. Boston's Paul Revere furnished the spikes and copper sheathing.

"Old Ironsides" is truly a national ship, springing from the strongest and best of our natural resources. Today, however, only about eight per cent of the original ship exists; all the rest has been restored from time to time. Nevertheless, it is the live oak which has virtually kept her together and made restoration possible.

On 21 Oct 1797, *Constitution* slid down the ways, just three years after the laying of her keel. The total cost of $302,718 represented, among other things, an investment in heavier guns than those carried by most frigates. While other ships carried 18-pounders, *Constitution* carried 24-pound guns. In addition, she usually carried 46 to 55 guns, although originally designed to carry only 44. During her battle with HMS *Guerriere*, for example, *Constitution* had thirty 24-pounders on her gun deck, twenty-four 32-pound carronades on her spar deck and a single 18-pounder bow chaser, for a total of 55 guns.

In 1798, French interference with American commerce had reached an alarming degree. While war was not declared, all treaties between the two governments

were abrogated and American cruisers were commissioned to patrol the coast and West Indies and capture French vessels. In July that year, *Constitution*, under Captain Samuel Nicholson, sailed in search of French armed vessels. She remained on active duty throughout the quasi-war with France, and after ratification of the treaty ending combat, was one of 13 frigates authorized to be retained as a permanent unit of the Navy.

For centuries, the four Barbary States of Morocco, Algiers, Tunis and Tripoli had levied tribute on even the most powerful European nations. If payment was refused, the ships were captured and the crews dragged off to slavery.

Since 1785, when Algerian corsairs had seized American merchant ships, holding them for ransom, the United States had suffered outrageous indignities and insults at the hands of Barbary pirates. More than a million dollars in gifts and money had been paid to the Dey of Algiers, in addition to an annual tribute of $22,000. Enraged that the Dey was receiving more tribute and attention, the Bashaw of Tripoli cut down the flagstaff at the American consulate on 10 May 1801, thus declaring war.

Fresh from an overhaul, USS *Constitution* sailed from Boston 14 Aug 1803 as Commodore Edward Preble's flagship in the Mediterranean. Arriving at Gibraltar on 12 Sep 1803, Preble directed his fleet of war vessels with great tactical skill. Misfortune, however, overtook the Americans. The 36-gun frigate USS *Philadelphia* struck a reef while chasing a Tripolitan cruiser and while she lay helplessly aground, enemy gunboats captured her and took the American crew as prisoners. Several days later, the pirates refloated *Philadelphia*, giving them a more formidable vessel than any they had possessed thus far.

Constitution's cabin soon became the meeting place where plans were laid for one of the most daring expeditions in naval history. Using the Tripolitan ketch *Mastico* (renamed *Intrepid*) captured by *Constitution* and *Enterprise*, Lieutenant Stephen Decatur and about 74 officers and enlisted men steered into Tripoli Harbor under cover of night. Fully armed and manned, the boat came alongside *Philadelphia*, moored within range of all the fort's batteries and surrounded by Tripolitan cruisers, galleys and gunboats. One wrong move and the Americans would be lost.

With the exception of several Americans disguised as Maltese sailors, the men remained concealed as the little ketch drifted toward *Philadelphia*. The pilot informed the sentinel that they had lost their anchors and wished to make fast to the cables of *Philadelphia* for the night. The ruse succeeded until one of the pirates peering from *Philadelphia's* rail caught sight of the men.

Before the pirates could gather themselves, the Americans, with cutlasses in hand, swarmed over *Philadelphia* in a hand-to-hand struggle. In less than 15 minutes, the ship was captured and the burning of the frigate started, for there was no chance of escaping with it. The destruction work was quickly done and the Americans regained their boat. Their escape seems a miracle, for the whole harbor was awake and the burning ship illuminated the bay, but not one American was killed.

Equally thrilling and dramatic are other tales of heroism and daring, as when during August and early September 1804 Preble's squadron again and again bombarded the Tripolitan fortifications and gunboats. *Constitution* repeatedly fired upon the batteries and the town while the smaller boats attacked the corsairs. Enemy fire caused some damage to *Constitution's* rigging and sails and her mainmast was struck once. The wounded were treated aboard *Constitution* and the prisoners were also confined there.

On 16 Sep 1804, Commodore Barron superseded Preble in command of the squadron. Preble turned over command of *Constitution* to Captain Stephen Decatur on 28 Oct 1804 and took up quarters ashore. Decatur remained until 10 November, when he and Captain John Rodgers, in *Congress*, exchanged commands. The blockade continued, although *Constitution* was sent to Lisbon to refit and recruit new crewmen. She returned to the blockade the following March as Commodore Rodgers' flagship. In her cabin, on 3 Jun 1805, the peace

Left: Men of Constitution cheer commencement of action in battle with British frigate Guerriere. Right: Constitution battles British ships Levant and Cyane. Facing page: Constitution, in full dress, celebrates Washington's birthday at Malta, in 1837.

treaty was drawn up by which tribute to Tripoli ceased and the American captives were released. The Bey of Tunis had been threatening trouble and Commodore Rodgers anchored there on 31 Jul 1805 and dictated a treaty ending tribute with that country as well.

When the United States again went to war in 1812, *Constitution* was to achieve her greatest renown as she stood invincible against the English Navy. Great Britain's hostile attitude toward our neutral commerce had reached the point that our national honor was at stake. Her persistent impressment of American sailors into her navy was an outrage. More than 6000 American citizens had been forced into the British service.

On 18 Jun 1812, war was declared. *Constitution* had recently completed overhaul in the Navy Yard at Washington, D. C., and departed there on 21 June to anchor off Annapolis, Md. Great Britain reigned supreme on the sea. Our small array of 17 war vessels against a thousand and more of the English Navy seemed almost ludicrous. English naval officers had been contemptuous of our ships, referring to them as the American "fir-built frigates," and implying that their designs were clumsy and too heavy for rapid maneuvering.

Constitution, commanded by Captain Isaac Hull, sailed from Cape Henry on 12 Jul 1812 to join Commodore Rodgers' squadron in New York. On the afternoon of 16 July, five sails were sighted off the coast of New Jersey. Captain Hull supposed them to be the American squadron. Early the next morning, he discovered that he had given chase to an English squadron. To make matters worse, there was little or no breeze.

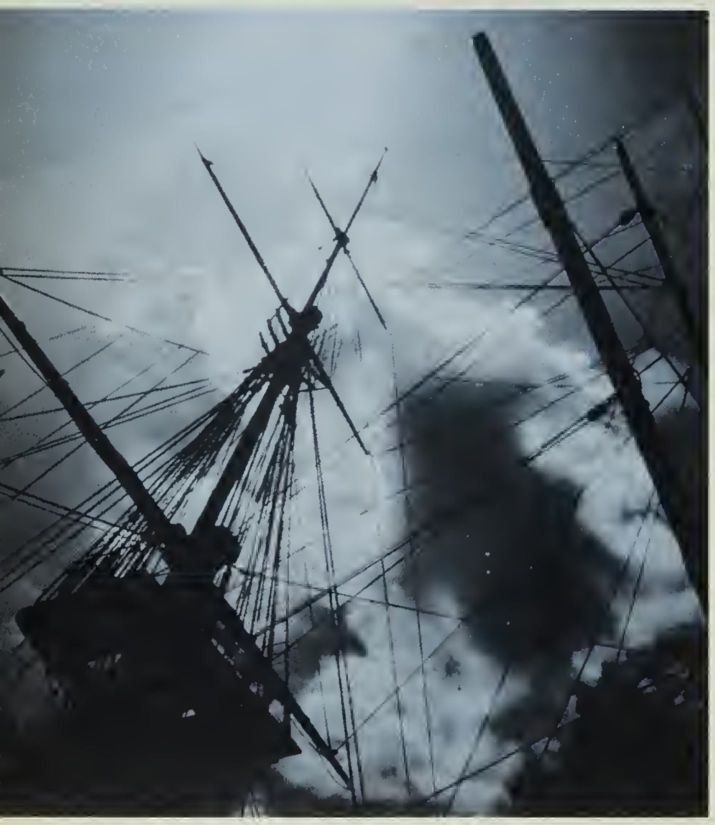
The British hoisted their colors and gave chase. They ran into some breeze and gained at first. Some of the frigates started firing and *Constitution* returned the fire. As the situation was fast becoming desperate, Captain Hull decided to make use of a kedge anchor. Hawsers and large ropes, all that could be found, were fastened together to form a mile-long line to which a kedge anchor was fastened. The anchor was lowered into *Constitution's* cutter, carried out to the length of the line, then dropped. The frigate was then manhandled up to the anchor, which was then quickly taken up and carried out once more. Steady gains were made before the British imitated and they could not cut down on *Constitution's* lead. After two days of maneuvering, during which all hands remained constantly on deck, Captain Hull outdistanced the enemy and the ship headed for Boston.

On 2 August, *Constitution* put to sea, heading for the coast of Nova Scotia. On 11 August she captured and burned the British brig *Lady Warren* in the Gulf of Saint Lawrence. The British merchantman *Adeona* suffered the same fate on 12 August. The American brig *Adeline* was liberated from a prize crew on 16 August and the British burned another small merchant ship to avoid capture.

On 19 August, southeast of the Gulf of St. Lawrence, a sail was sighted. *Constitution* made for her with all canvas set. It proved to be HMS *Guerriere*, a British 38-gun frigate. This time, however, *Guerriere* carried 49 guns. When *Constitution* was still far astern, the Britisher began firing. Only a few shots were fired in return as *Constitution* bore down upon the enemy. Impatiently the men stood at their quarters, the gunners awaiting the order to fire. Not until the ships were fairly abreast did Captain Hull give the word, "Now, boys, pour it into them!" A whole broadside struck *Guerriere* and then another. In 25 minutes her mizzenmast went over. *Constitution* passed ahead and crossed the enemy's bow and sent a raking broadside crashing down the entire length of the enemy's decks which tore away much of her rigging.

The story is told that shots from *Guerriere* made no impression upon the outside planking of *Constitution*, but fell into the sea, whereupon one of the sailors shouted, "Huzza! Her sides are made of iron!" Thus did *Constitution* gain the renowned title of "Old Ironsides." The flag on the fore-topgallant masthead of *Constitution* had been shot away and an Irish lad, Daniel Hogan, climbed up amid a shower of bullets and lashed it to the mast.

Guerriere's bowsprit fouled in the lee mizzen rigging of *Constitution* and both sides tried to board, but the sea was rolling too heavily. *Guerriere* fired pointblank into the cabin of *Constitution* and set it on fire, but the flames were quickly extinguished. As the ships separated, *Guerriere's* foremast and mainmast went by the board and she was left a helpless hulk. Captain Dacres struck his flag in surrender and she was in such a crippled condition the Americans had to transfer the prisoners and burn her. The British had 15 men killed and 63 wounded while the Americans had seven killed and seven wounded in this battle which lasted nearly 40 minutes, one of the shortest in history.



It was a dramatic victory for America and for *Constitution*. In slightly more than half an hour, the United States "rose to the rank of a first-class power," and the country was fired with fresh confidence and courage. More importantly, the union of states was greatly strengthened.

Less than five months later, on 29 December, *Constitution*, then commanded by Commodore William Bainbridge, won a similar victory over the 38-gun frigate *Java* about 30 miles off Brazil. Firing started with broadsides from both ships. *Constitution*, with her wheel shot away at the beginning, had to do some clever maneuvering to avoid being raked, but the American gunnery proved superior. In two hours *Java* was completely dismasted and helpless. Captain Lambert, her commanding officer, was mortally wounded and his successor surrendered. *Java*, hopelessly wrecked and with a probable 48 dead and 102 wounded, met the same fate as *Guerriere*, *Constitution* suffered 12 killed and 22 wounded, including a wounded captain.

At the end of February, *Constitution* reached Boston where there was great rejoicing over her victory. The ship then underwent an extensive overhaul. When again ready to fight (in 1814), except for a short cruise under Captain Charles Stewart, "Old Ironsides" was shut in the Boston harbor for eight and a half months by the strenuous British blockade. Taking advantage of bad weather and poor visibility on 18 Dec 1814, Captain Stewart slipped past the enemy. This began the ship's final war cruise.

On 20 Feb 1815, *Constitution* had her last great fight. She spotted two Britishers off the island of Madeira. The frigate *Cyane* and the sloop *Levant* were smaller and lighter, but their combined batteries were heavier than *Constitution's*. Captain Stewart's very skillful maneuvering kept the enemies to leeward, while he repeatedly raked them but avoided being raked once himself. Four hours later, both had surrendered. Homeward bound with her two prizes, "Old Ironsides" made one of her famous escapes. Chased by a British squadron, she narrowly escaped ending her days as an English ship, but her good luck and good seamanship saved her and her prize *Cyane*, although *Levant* was retaken by the British.

Having learned that the war was over, Captain Stewart sailed for home and anchored *Constitution* at New York on 16 May 1815. Her war service had ended and she had played a truly glorious part in proving the worth of seapower as a primary key to national survival.

Constitution was soon ordered to Boston, where she was laid up for nearly six years. She was recommissioned in 1821, whereupon she went on two cruises to the Mediterranean. She returned home to Boston on 3 Jul 1828 and shortly thereafter was decommissioned to undergo survey for cost of repairs. She was reported unseaworthy and condemned to be broken up. A poem by Oliver Wendell Holmes, Sr., entitled "Old Ironsides," aroused such popular feeling that money was appropriated for rebuilding her in 1833. The reconstruction was completed in June 1834.

From 1835 to 1855, *Constitution* made numerous voyages, the most important being her cruise around the world in 1844-1846, under Captain John Percival, when she covered 52,279 miles in 495 days at sea.

During the Civil War, the sailing frigate gave way to the progress of shipbuilding and the steam-propelled ironclad monitor, the crude beginning of the modern battleship. From 1861 to 1865, "Old Ironsides" was used by the Naval Academy as a training ship. In 1871, she was rebuilt at Philadelphia and in 1878 went on her last trip abroad, carrying goods sent by citizens of the United States to the Universal Exposition at Paris. Her long active service at sea closed 14 Dec 1881.

From Portsmouth, N. H., where she was used as a receiving ship beginning in 1884, *Constitution* was brought to Boston, her birthplace, for the celebration of her centennial in 1897. Again threatened with destruction in 1905 because her timbers were gradually rotting away, public sentiment came to her rescue and she was partially restored. The ravages of time continued, however and, in 1925, plans were made for a complete renovation of the proud old warrior.

At the former Boston Navy Yard, "Old Ironsides" was rebuilt from truck to keel. Funds for the restoration were generously subscribed by the people of America, a large part of which were raised by schoolchildren, and the balance necessary was appropriated by Congress.

After a tour of the important seaports of the United States that started at Boston, 2 Jul 1931, covering more than 22,000 miles, "Old Ironsides" returned to the Boston Navy Yard on 7 May 1934.

Since 1941, USS *Constitution* has been continuously in full commission, the longest unbroken such period in her history, and is currently serving as flagship of Commandant, First Naval District.

For decades, this vessel, as well as Boston Navy Yard, has attracted millions of visitors. In a move to preserve these two sources of pride, patriotism and inspiration for Americans, Congress has approved a proposal to set aside a portion of the former shipyard for exhibiting "Old Ironsides" and the history of the Boston Navy Yard.

Administered by the National Park Service, the 30 acres will serve as a historic setting for not only the record of the oldest commissioned Navy ship, but also development of the Navy and naval technologies. The site will encompass many of the earliest buildings constructed during the period 1800 to 1860, a formative time for both the Navy and the shipyard.

To be included in the National Historic Site is a naval museum with a gift shop. Sponsored by the USS Constitution Museum Foundation, Inc., a nonprofit organization, this museum will preserve many documents, paintings and other artifacts of "Old Ironsides" and her period in history.

USS *Constitution* is not only America's heritage, but also America is 'Old Ironsides' heritage.

Facing page top: A recent sketch by artist Ensign John Roach, USNR, of Constitution during restoration. Bottom: Masts and rigging of Constitution. Above: Photograph taken of painting from which "Old Ironsides" stamped envelope was conceived. Below: Constitution during a yearly turnaround cruise.

THE NAVY FAMILY

In the earliest days of the sea service, the important role of the Navy wife as a part of the Navy team went unrecognized or forgotten. Today however, her contributions to the Navy have become not only officially recognized, but her opinions have been sought out—she is a significant part of the sea service "family." Today the Navy wife can become involved in a number of activities which are vital to the morale, effectiveness and well-being of the entire Navy family. In return, she is rewarded not only by the knowledge of doing an important job, but also by many tangible benefits.

One important way the Navy wife gets involved is through membership in a local chapter of the Navy Wives Club of America (NWCA). In addition to companionship and social activities, the local wives clubs aid Navy chaplains and assist in YMCA programs for servicemen, in the national blood donor program and in Navy Relief Society projects. The NWCA sponsors special college and vocational school scholarships for children of enlisted personnel. The ladies are also very experienced in coping with problems of family separation, moving and adapting to a new community. NWCA members are always eager to share their tips and ideas with younger, less knowledgeable Navy wives.

Getting settled into a new duty-station area is often difficult. To ease this hardship the Navy established personal service centers. Navy wives often volunteer their time to give newcomers the information and assistance they need to get settled in their new community by helping them find suitable housing, distributing hospitality kits, assisting until household goods arrive, answering questions and helping in many other ways.

Closely associated with the work of the personal service centers is the Navy's sponsor program. A

Facing page top left: Betsy Ross was not a member of the Navy family but a patriotic friend, according to legend. In this painting she's depicted presenting the new American flag to John Paul Jones. this legend has not been proved or disproved. At left Mrs. Higginson, wife of a Navy admiral, was the first president of the Navy Relief Society. The following photographs represent various scenes typical of a Navy family.

sponsor, which is often a team consisting of the Navyman who is completing his tour of duty and his Navy wife, provides assistance to another Navy family newly assigned to the area by providing special services before the family arrives. This includes sending them area guides, maps, the locations of helpful offices and other important information. Often it is the wives' special knowledge of housing, shopping centers, schools, parks and the like which can be of particular value to the new family. Upon arrival the new family is comforted by the knowledge that they have already a friend in the strange area and personal help until they learn their own way around.

Since inception of the Overseas Family Residence Program (OFRP) in 1973, families of married personnel have been more encouraged to reside overseas to avoid long separations. If settling into a new area in the States is sometimes difficult, it may seem more so overseas. An important part of the program designed to ease the hardships of moving overseas is the Dependents' Assistance Team (DAT). Like the personal services centers and sponsorship programs Stateside, DAT helps the new arrivals adjust, get settled and, hopefully, enjoy their stay in a foreign land. Like the Stateside programs, DAT depends heavily on Navy wives of men already stationed in the country to help out.

Supplementing the work of the DAT is the Intercultural Relations Office (IRO), created to help American military personnel and their dependents understand the mores and customs of the foreign land where they're stationed. Once again, it is the Navy wife who donates her time and knowledge to make the program a success.

Many Navy wives also donate much of their time working with the Navy Relief Society. Sole purpose of the Society is to assist other members of the Navy family when there is an emergency need beyond their personal capability to meet. By volunteering their time at auxilaries and branches of the society, Navy wives help keep operating costs down. This allows the Society to put more money into the hands of needy Navy families and allows the program to work for the greater benefit of all.

Still another way in which Navy wives contribute to the well-being of the whole Navy family is through active participation in the Navy Wifeline Association. The Association, in which all Navy wives are automatically members, has as one of its main purposes serving the Navy family through information and communication of helpful facts and hints about Navy service and benefits. This is accomplished through material such as their quarterly publication "Wifeline—the magazine for Navy dependents" and books such as the *Blue Jacket*'s *Mate, Recipes for the Navy Bride, Tag-Along to Europe* and others. Without the written contributions and active participation of Navy wives, this valuable assistance to Navy families would be impossible.

In return for her unselfish giving to make the Navy better for us all, the Navy wife receives not only a great deal of self-satisfaction, but also the benefits of being a Navy family member. These are her commissary and exchange privileges, medical benefits, use of recreation facilities, legal assistance, travel and other well known benefits. In today's Navy the wife is a very important part of the team.

NAVY WOMEN

The history of women in the Navy dates back officially to 1908 when the Navy Nurse Corps was established.

The story of Navy nurses will be told at length in a forthcoming issue on the "History of the Corps." To summarize briefly the report on nurses:

Back in 1811, a Navy surgeon first recommended that women be employed in hospitals to care for the Navy's sick and wounded. The idea was not acted upon at that time, but in the Civil War women nurses (nuns of a Roman Catholic religious order), although not part of the Navy, came aboard the hospital ship USS *Red Rover* to serve in the Medical Department. In the war of 1898, the first trained nurses in the Navy, though not an official unit, were employed at the Norfolk Naval Hospital to care for the injured. A decade later (in 1908), the Nurse Corps was officially born.

It was in World War I that woman's role in the Navy came into its own. In addition to the Navy nurses some 12,000 women served on active duty as "yeomanettes."

As previously reported in ALL HANDS, Josephus Daniels, then Secretary of the Navy, told the story of how this came about. There was a particular need for yeomen and personnel in related jobs to handle the burgeoning demand from headquarters and naval shore stations as the nation readied itself for World War I. "Is there any law that says a yeoman must be a man?" Daniels asked his legal advisors. The answer was that there was not, but that only men had heretofore been enlisted.

"Then enroll women in the Naval Reserve as yeomen," the secretary said. In such jobs, he added, they would offer the best "assistance that the country can provide."

Establishment of Yeoman (F), better known as the Yeomanette, was accomplished under provisions of an Act of 29 Aug 1916, the Act which set up the Naval Reserve Force. The Navy Department sent the following letter to all commandants of naval districts on the subject of enrollment of women in the Naval Coast Defense Reserve. "After a careful reading of . . . the Act . . . nothing can be found which would prohibit the enrollment in the Naval Reserve Force and in the class mentioned of women. On the contrary, it is believed that their enrollment was contemplated."

Immediately after the U. S. entered World War I, women were taken in on a large scale "in order to release enlisted men for active service at sea." As a result, a total of 11,275 Yeomen (F) were in service by the time the armistice was signed and most of the immense volume of clerical work at the Navy Department, in addition to many highly important special duties, was being handled by them.

Along with the purely clerical and administrative duties performed by the Yeomen (F), others served as translators, draftsmen, fingerprint experts, camouflage designers and recruiters. Five Yoemen (F), enlisted by the Bureau of Medicine and Surgery, served with Navy hospital units in France. One served in connection with the operations of the Office of Naval Intelligence in Puerto Rico.

Yeomen (F) were stationed in Guam, the Panama Canal Zone and Hawaii, in addition to the United States and France. About 300 "Marinettes," as the feminine enlisted personnel of the Marine Corps were designated, were on duty during the war. Most of them were stationed at Marine Corps Headquarters at the Navy Department, although a number were assigned with Marine Corps recruiting units.

All Yeomen (F) were released from active duty by 31 Jul 1919, and to them Secretary Daniels sent the following message: "It is with deep gratitude for the splendid service rendered by the Yeomen (F) during our national emergency that I convey to them the sincere appreciation of the Navy Department for their patriotic cooperation."

As enlistments had been made for four years, the Yeomen (F) were continued on the rolls of the Navy in inactive status and received the retainer pay of $12

Above: Yeomanette during World War I. Left: Yeomanettes assigned to 13ND in 1917. Right: Yeomanettes pose with Marine counterparts, Marinettes. Man with straw hat is Assistant SecNav Franklin Roosevelt standing next to Secretary of the Navy Josephus Daniels.

a year until the expiration of enlistment, when they were discharged from the naval service.

A large number of women who had been on duty in the Navy Department and at Navy yards and stations were given temporary appointments to similar positions under the Civil Service. There were also provisions for military preference for former Yeomen (F) in Civil Service positions and they were allowed an increase of five per cent on Civil Service ratings for permanent jobs. They were also included in all subsequent benefits affecting World War I veterans.

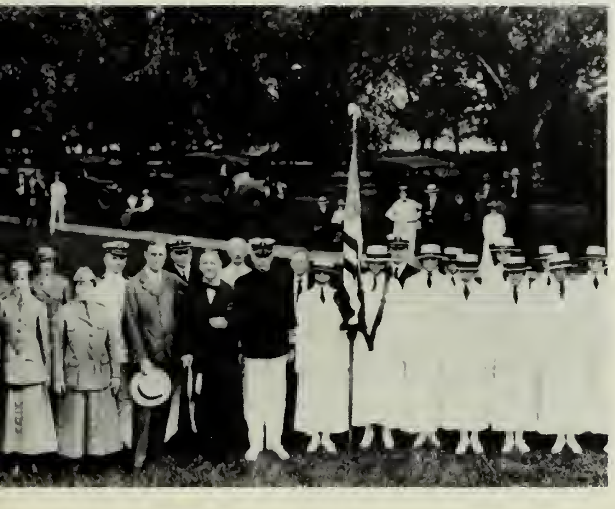
Unfortunately, it took another war before women were once again allowed to serve in the Navy. Twenty-one years after the Yeomenette era, women were needed to fill an acute shortage of personnel caused by rapid expansion of the Navy for World War II. On 30 Jul 1942, Congress authorized establishment of the Women's Reserve, with an estimated goal of 10,000 enlisted women and 1000 officers.

There were certain Congressional limitations on this new organization though. Women could not serve at sea or outside the continental United States, could not exercise military command over men and could not go beyond lieutenant commander on the promotion ladder. On 4 Aug 1942, Mildred Helen McAfee, president-on-leave of Wellesley College, was sworn in as lieutenant commander, U. S. Naval Reserve, to become Director of Women's Reserve.

A group of specially selected women was commissioned as lieutenants and lieutenants (junior grade) for administrative duty. On 28 Aug 1942, less than a month after enactment of necessary legislation, the U. S. Naval Reserve Midshipman's School, Northampton, Mass., was commissioned for training an advance group of approximately 100 women officers. This group was composed largely of officers for assignment to recruiting duty, procurement of additional women for the naval service and to the staffs of training schools soon to be opened.

This impetus in the training program came in early October, when 900 probationary officers and apprentice seamen arrived at Northampton for official opening of that center.

A boot camp for WAVES was established at Hunter College in New York City—it was promptly dubbed USS *Hunter*. Basic training lasted from six to eight weeks, and every other week some 1680 Wave seamen had to be housed, fed and uniformed (the housing was provided in 17 apartment buildings near the college taken over by the Navy).



At about the same time, three other schools were commissioned in the Middle West to train enlisted women as yeomen, storekeepers and radiomen. In July 1943, the Navy Japanese Language School in Boulder, Colo., opened to women.

In the ensuing months, Navy women came to work the same hours as Navy men, standing both day and night watches. Their liberty arrangements were the same and they enjoyed the privileges of the U. S. O. and other recreation facilities available to men. They stayed in uniform at all times except in the barracks or when engaged in active sports, and were called upon to meet the same standards of neatness and good behavior as required of all men in uniform.

In short, they were fitted into the Navy as an integral part of the service. They slipped into the same spot in the chain of command as the men they replaced and performed the same duties. This system gave Navy women—or WAVES, as they were popularly called—the same status, responsibilities and restrictions as men.

Use of the word "WAVES" had begun when the reserve classification for women officers was selected as W-V(S), meaning Woman-Volunteer (Specialist). BuPers regulations said these were Women Accepted for Volunteer Emergency Service; the initial letters of that phrase, capitalized, formed "WAVES." But the formal name was Women's Reserve, United States Naval Reserve; the commissions granted to officers at the time read: ". . . I do appoint him ensign in the Naval Reserve of the United States Navy."

The initials WR and the term "Women's Reserve" were official and some women preferred these terms to the equally official, but less formal term of WAVES.

As the Women's Reserve observed its second anniversary on 30 Jul 1944, it could look back upon a brief but glowing record of expansion and achievement. During its two years of existence, its members had freed enough officers and men to crew a fleet of 10 battleships, 10 aircraft carriers, 28 cruisers and 50 destroyers.

With passage of legislation which removed certain previous restrictions on rank, Women's Reserve Director Mildred H. McAfee had been elevated to the rank of captain. (The Women's Reserve Director held this rank as long as she was in that job.) This legislation also made it possible to promote WAVE junior officers by the same system applied to men. In addition, enlisted WAVES were granted opportunities to strike for higher ratings, resulting in several hundred reaching first class petty officer and at least four making chief petty officer. (It was not until 1967, however, that rank restrictions for women were removed and promotion zones for women were established.)

In World War II WAVES were considered directly eligible for 34 different ratings and were peforming nearly every conceivable type of duty at 500 naval shore establishments.

The time was now 1945 and "Well Done!" came the word from Fleet Admiral King, the Navy and the nation as the WAVES marked their third anniversary. In three war years, the "women in blue" had demonstrated their

People

NAVY WOMEN

skills, courage and devotion to victory, all the way from the Atlantic Coast to Pearl Harbor.

On its third anniversary, the Women's Reserve numbered 86,000—8000 officers and 70,000 enlisted on duty at 900 shore activities, plus another 8000 in training or awaiting call to duty.

In a public birthday message to the WAVES, Secretary Forrestal pointed out that "Today, the WAVES have released enough men for duty afloat to man completely a major naval task force." Women in the Navy had released 50,500 men for shipboard or overseas duty; had taken on 27,000 additional jobs; and now made up 18 per cent of all naval personnel on shore duty, performing almost every type of shore job.

Eighty World War II WAVE officers had become the first women officers entitled to serve as members of military air crews in any U. S. military organization. They wore the gold wings of the naval air navigator and would serve in crews flying to such points as Hawaii and the Aleutians. All told, naval aviation used almost a third of all women in the Navy. Many repaired planes, packed parachutes and collected weather information. At least four control towers in the United States were manned entirely by WAVES. Still others were Link trainer instructors, giving lessons to 4000 men each day. The list was endless.

As the Navy had grown, the jobs for women had grown. Mail service for the fleet and extracontinental activities were now handled 80 percent by WAVES. "Radio Washington," nerve center of the wide-flung Navy communication system, was manned 75 per cent by WAVES and at BuPers, 70 per cent of the complement was WAVES.

Other enterprises now largely in feminine hands were those of getting supplies out to the fleet and the advanced bases, paying Navy personnel and accounting for expenditures. In addition, the first WAVE officers had gone overseas, following Congressional passage of necessary legislation in September 1944.

In concluding his tribute to the WAVES on their third anniversary, Secretary of the Navy Forrestal said, "I congratulate the members of the Women's Reserve. You have every right to be proud. Your conduct, discharge of military responsibilities and skillful work are in the highest traditions of the naval service. Keep up the good work."

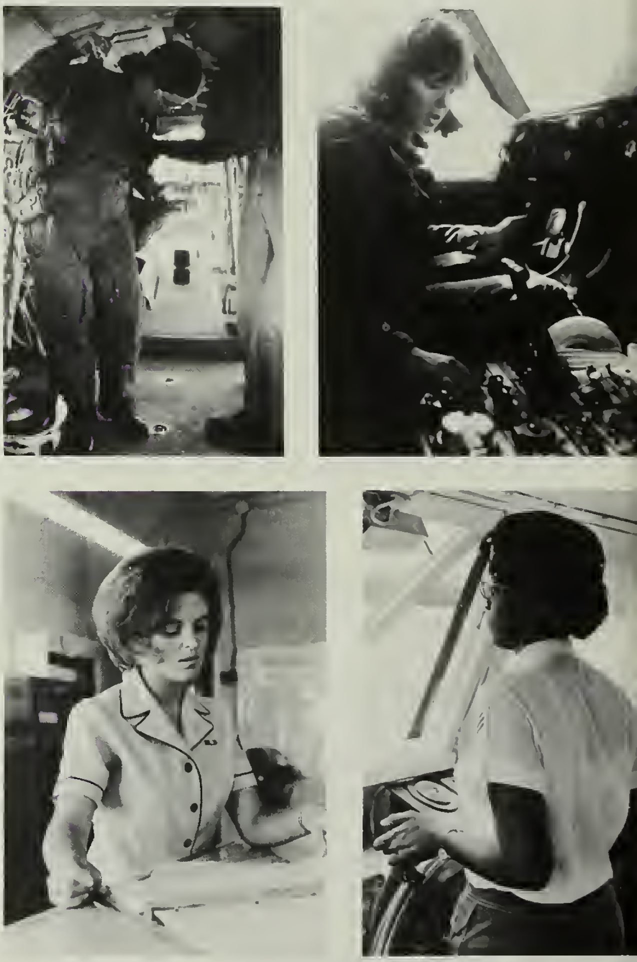
After World War II, the total of women on active duty decreased greatly, and by September 1946, most Navy women had been discharged or released to inactive duty. Captain Mildred H. McAfee was relieved by Captain Jean T. Palmer on 2 Feb 1946 who was then succeeded by Captain Joy Bright Hancock on 26 Jul 1946.

During the war, the WAVES had proved their worth and the Navy was reluctant to give up its programs for women. A number of Navy women were retained in service, but by the fourth anniversary of the program, only 9800 remained on active duty.

On 27 Mar 1946, the Navy asked Congress to authorize the enlistment and appointment of women into the regular Navy and Naval Reserve. More than a year later, WAVE legislation was approved by the Senate, but before final action on the bill had been taken by the House, Congress adjourned.

When Congress reconvened, the Navy again requested legislation for the integration of women into the permanent structure of the regular Navy. The Women's Armed Services Integration Act, Public Law 625, was passed by the Senate and the House and signed by the President. It became law on 12 Jun 1948, marking another step forward.

This was perhaps the most significant milestone to date in the history of the WAVES. Women were now given full partnership on the Navy team; the Women's Reserve was abolished and, for the first time, women became a part of the Regular Navy. The 1948 act provided that the number of enlisted women would not exceed two per cent of the authorized active enlisted



Top left: Jet mechanic (ADJ) suits up with a little help from a crew member. Top right: Another first shows Navy women in the pilot's seat. Bottom right: This Navy woman was among those assigned as line handlers and coxswains of tour boat to USS Arizona Memorial. Bottom left: Paperwork may not be as exciting as some other jobs women are now doing but it is just as important. Right: Women are trained alongside men at Naval Officer Candidate School, Newport, R. I.

strength of the regular Navy, and that the number of commissioned and warrant WAVES would not exceed 10 per cent of the authorized number of enlisted women.

The Navy's first move in implementing the new legislation got underway the day after the President signed the bill. Word came out of Washington that, effective immediately, Reserve women could enlist in the regular Navy. On 7 Jul 1948, the first enlisted women were sworn in.

In May 1949, the Navy announced that it intended to assign WAVES to billets overseas. The modern WAVES, however, were no strangers to overseas duty, since enlisted women had been serving as flight orderlies on board military transport planes which flew to Germany, Bermuda and the Caribbean area from the East Coast, and to Hawaii and Alaska from the West.

At the same time the Regular Navy opened to women, the Reserves established a program for WAVES. The new laws abolished the Women's Reserve and authorized the transfer of all members to appropriate components of the permanent Naval Reserve.

The eighth year of women in the Navy brought wider areas of assignment. Enlisted WAVES were assigned to overseas billets in London, officers were assigned to duty in Guam, Egypt, Alaska and Germany and on 10 Feb 1950, the first WAVES to pull duty in Hawaii since 1946 departed the United States for Pearl Harbor.

Additionally, the tradition that "women don't serve at sea" was broken when WAVE medical officers were ordered to duty aboard hospital ships.

During their 11th year, a program was established giving outstanding enlisted women the opportunity to receive commissions in the regular Navy. Also, on 1 Jun 1953, Captain Louise K. Wilde relieved Captain Hancock as director.

By the end of the 11th year, enlisted WAVES were serving on board hospital ships and transports which moved dependents between the United States and overseas installations. (Title 10, Section 6015, of the U. S. Code provides that women of the Navy will not serve on vessels of the Navy other than hospital ships and transports.)

In 1954, Navy women celebrated their gold hashmark anniversary. Many enlisted women had been on active duty long enough to rate the gold service stripes which signify 12 years of good conduct. Also that year, the first class of women reported to Newport, R. I. under a new Officer Candidate School (OCS) training program which replaced the system of direct commissions. The peacetime strength of the WAVES was fixed at 500 officer and 5000 enlisted.

Since that time, Navy women have continued achieving milestones which their predecessors surely would have thought impossible. Their progress in the sixties, and even more so in the seventies, has seen them move into more fields and serve in jobs both at home and overseas. In 1972, some 11 decades after the Navy authorized its first rear admiral (David G. Farragut), a woman was selected for that grade, RADM Alene Duerk (NC), USN. In 1973, the first senior line woman naval officer to assume a command billet in a combat zone was serving in Vietnam.

Today, a large percentage of enlisted women are participating in the medical/dental fields, the various aviation career specialties, and the administrative/clerical field. In addition, women are also working in some of the Navy's most technical ratings such as Data Systems Technician (DS) and Electronics Technician (ET). To cite some examples, such ratings as Lithographer, Illustrator Draftsman, Musician, Aviation Antisubmarine Warfare Technician (AX), and Aviation Fire Control Technician (AQ) were added to the list for which women were eligible. Enlisted women now have the opportunity to serve in a wide range of ratings.

In 1974, the Navy commissioned its first woman pilots (in a test program), and a group of women officers and enlisted women were serving in a pilot program as members of the crew in the hospital ship USS *Sanctuary* (AH 17). The CO deemed the pilot program, within its set limits, a success and stated the women aboard *Sanctuary* performed their duties well. With the decommissioning of *Sanctuary* the assignment of women to shipboard duty came to an end and they are restricted as before, from serving on naval vessels other than transports and hospital ships. However, much valuable information has been gained from these test programs.

Elsewhere, women have entered new fields as members of the Navy team. In an interview in December 1974, the Chief of Naval Operations, Admiral James L. Holloway III said, "Both the overall numbers and the percentage of women in the Navy are increasing significantly."

The figures have shown that in the two-year period ending this June, the number of enlisted women has doubled to approximately 17,000 and the number of women in the line and staff is expected to increase 20 per cent by the end of this year.

Said Admiral Holloway, "As you can see, we are continuing to emphasize the importance of women in all facets of Navy life."

People—Of
MANY HERITAGES

The sea does not concern itself with the color of a person's skin, nor his race. Since earliest days, men of many races have sailed and explored the oceans. Historical records indicate that the navigator of Columbus' ship *Nina* on that first voyage to the New World in 1492 was a Black by the name of Pedro Alonzo Nino. Since that time—probably before as well—Blacks have engaged in voyages and expeditions along with other races the world over. For example, a Black African called Abubakar is said to have dispatched an expedition from western Africa out into the Atlantic to discover new land in the late 1400s.

Searching through the pages of history in the period of the American Revolution uncovers only a few items here and there concerning the makeup of those early crews, and even the extent and accomplishments of hundreds of voyages go unrecorded. Underscoring the dearth of records, logs and diaries concerning the early ventures upon the high seas, is the fact that men were too busy—and in some cases insufficiently schooled for the task of properly recording their accomplishments. The life of the early mariner had an air of immediacy; survival itself was a factor in the daily routine of early captains and their crews.

And when records were kept, more thought was given to account-keeping as it centered on cargoes, ports and charges due and paid, than to listing in any detail the composition of various crews or even the clothes they wore. However, the fragmentary records existing covering the American Revolution indicate that the number of Blacks who served the cause of the colonies, in the Continental and State navies and aboard privateers, numbered about 1500.

During the Revolution, most of the 13 colonies promised freedom, land and money to Blacks who would join their naval militias to take up the slack caused by desertions. They manned boats, worked sails, serviced the guns and even piloted coastal vessels. The overriding factor in their service was the promise that after three years of service they would be set free. Three Blacks who served with distinction were James Forten, Mack Starlin and Caesar Terront.

Forten was a 14-year-old powder boy and veteran of several sea battles when he was captured and made a prisoner of war in the English ship *Amphyon*. Offered liberty and a life of ease in England by the ship's captain, Forten turned down the offer saying, "I am a prisoner for the liberties of my country and I shall never prove traitor to her interests." Sent to the notorious British prison ship *Old Jersey* in New York harbor's Wallabout Bay, he remained a captive for 14 months. Following the war, he eventually became a wealthy sailmaker in Philadelphia.

Captain Mack Starlin was the only black naval captain in Virginia's history. He made night raids on British vessels in Hampton Roads. Starlin—from a slave colony—was reclaimed after the war and ended his days in slavery. Others won their freedom.

Caesar Terront, for example, a pilot aboard a Virginian vessel captured by the brig *Fanny*, was cited for

gallantry in action. His freedom was later purchased by the Virginia Legislature.

With the establishment of the "new" Navy in 1798, there came a contemporary policy of discontinuing the enlistment of Blacks, disrupting a nonracial enlistment policy in effect in earlier years. One, however, a William Brown, managed to enlist aboard *Constellation* where he served as a gunpowder loader. Another, George Diggs, became a quartermaster in the schooner *Experiment*.

In the War of 1812 and the latter years of the 1800s, the Navy had no definite policies of separation and segregation based upon race. Blacks, both slaves and freedmen, served in many ratings and were often commended in ships' records and other historical documents as being "excellent seamen" and "among the best of the Navy's personnel."

During the War of 1812, the nation's second conflict with Great Britain, one in every six sailors in the Navy was Black. When Oliver Hazard Perry won the key battle of Lake Erie, he praised the Black members of his crew saying, ". . . they seemed absolutely insensible to danger."

Perry's crews endured much—including the lack of fresh water aboard ship and other discomforts. But the crews endured the hardships together. White and Black seamen messed together and shared the same quarters, indicative of the absence of prejudice among the enlisted crewmembers. Commodore Isaac Chauncey, discussing the members of his crew, remarked, "I have nearly 50 Negroes aboard this ship, and many of them are among my best men."

Essentially, the Civil War was a struggle against secession and its core was states' rights. It was also a struggle against slavery. As in previous wars, the Blacks served in the Armed Forces. In September 1861, the Navy Department authorized their enlistment, if their services proved useful, "under the same forms of regulations applying to other enlistments." Throughout the long, hard struggle, Blacks rendered valuable and faithful service—runaway and freedman alike. They served where needed, in such jobs as gunners, coal passers, stewards, firemen and loaders. A Black pilot, Robert Smalls, along with 15 slaves, escaped the South in the gunboat *Planter* while her Confederate officers were ashore. *Planter* made her way North and Smalls and his crew served the Union until *Planter* was decommissioned in 1865. Later, Smalls served in Congress as a representative from South Carolina.

Many Blacks served as gunners and in landing parties during that conflict, rendering effective service and were cited for bravery under fire.

Pointing up the role of Blacks in the Civil War, one out of four sailors in the Union Navy was Black. Black casualties numbered about one-fourth of the Navy's total of victims.

By the time of the War with Spain, Blacks regularly served in the crews of Navy ships. For example, when the battleship *Maine* sank as a result of an explosion in Havana harbor, of the 250 crewmembers lost, 22 were Blacks. This was the event which sparked that conflict.

Here is a sample of the heroism demonstrated by Blacks in the Spanish-American War. Fireman 2nd Class Robert Penn was on duty near the boiler room of USS *Iowa* when his ship was ripped by the explosion of a ruptured boiler. To prevent another possible explosion, the hot coals from the boiler had to be removed

Opposite page top: Oliver Hazard Perry praised his crewmembers for the courage they exhibited during key battles on the Great Lakes. Opposite page bottom and left: Black officers are found performing all types of duties in all ranks in today's Navy. Below: London proves an interesting duty station for this chief taking in some of the sights of the city.

MANY HERITAGES

immediately. Penn placed a board across two buckets in order to keep his feet out of the scalding water covering the deck and, at the risk of great personal injury, carried the coals out of the danger area. For this act he was awarded the Medal of Honor.

In the first decade of the 20th century, a Black, Matthew A. Henson, accompanied Commander (later admiral) Robert E. Peary on his adventures in the Far North. He was Peary's chief assistant and trusted companion for 23 years. Wherever one went, the other was also. Together they shared the glory of being the first men to reach the North Pole—that was on 6 Apr 1909. The Peary-Henson drama stands as an example of two men working toward achievement of common goals.

It was during World War I that the Navy began to show partiality in the treatment of Navymen from minority groups. Thousands of Black Americans volunteered for naval service during that time, but for the most part, they were assigned noncombatant duties. In fact, they were only allowed to enlist as stewards or mess attendants, or to fill jobs on supply vessels, although there were a few holdovers from earlier days.

During World War II, Blacks in the Navy were still assigned duties primarily as stewards and mess attendants, with a few exceptions. This did not prevent many of them, Dorie Miller for one, from distinguishing themselves at battle stations under fire.

Mess Attendant 1st Class Dorie Miller served aboard the battleship USS *West Virginia* during the Japanese attack on Pearl Harbor. He took over an antiaircraft gun from a dying shipmate and shot down at least two enemy bombers (some sources say four). He was awarded the Navy Cross but lost his life later in the war.

In 1942, the Navy began its efforts to reverse the trend and restore equal opportunity to all Navymen. Volunteers from minority groups were accepted for all ratings. At first these volunteers were grouped into segregated units. In fact, two antisubmarine vessels—the destroyer escort USS *Mason* (DE 529) and the submarine chaser PC 1264—were manned by mostly Negro

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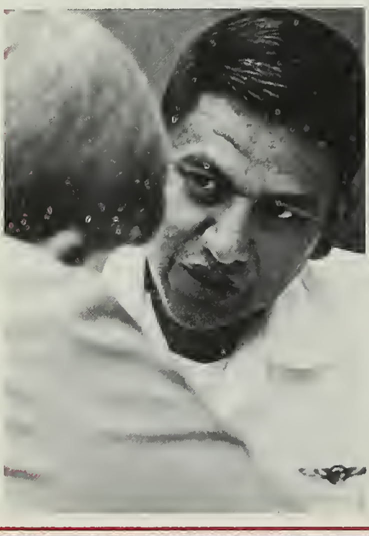
EQUAL OPPORTUNITY. . . A GROWING TRADITION

Tecumseh, an Indian whose name SSBN 628 now bears; Mariano Guadalupe Vallejo, a Mexican-American for whom another nuclear submarine is named; Dorie Miller, a Black who won the Navy Cross and whom the frigate FF 1091 honors with his name; Telesforo Trinidad, a Filipino who earned the Medal of Honor while serving with the U. S. Navy—these are but a few examples of members of minority groups receiving recognition by the Navy for their contributions, either to the Navy or the community. Minority members have served their country, often with sacrifice, from its beginning, but have not always gotten the recognition, treatment and praise they deserve. The Navy has, however, made significant progress in this area.

Today's Navy is working to see that the human dignity of every individual is preserved, and that minority members are assured equal treatment, opportunity, recognition and reward for their part in the team's effort. Some specific actions which have been taken to meet this commitment are:

- The Navy Recruiting Command is working to attract more minority members to the Navy through recruiting programs and has billets for minority officers to serve at recruiting stations.
- The Navy has a Human Goals plan which concerns itself with Navy people as individuals and as members of an effective team. The Human Goals plan is the responsibility of commanding officers, ashore and afloat, and an important aspect of it is in the area of



crews and established distinguished wartime records.

In 1944, the first Negro naval officers in the history of the United States received their commissions. The first group included 12 ensigns and a warrant officer.

There were approximately 165,000 Blacks serving in the Navy by 1944. When the war was over they returned to a society which was still largely segregated.

But in the years since that conflict, within the Navy, the quality of life for minority groups has steadily improved and today opportunities for advancement and job satisfaction are probably greater than ever before.

In 1971, to ensure equal opportunity for all so that the human dignity of every individual will be preserved, the Navy set up a series of goals and objectives, called the Navy Charter. This called for an effort to attain and retain the highest quality officer and enlisted volunteers from the minority community and to create and maintain a program of equal opportunity and treatment for all.

The charter desired to identify and eliminate all bias in an effort to make the Navy a model of equal opportunity. Goal II reads: "To provide real opportunity for all personnel of the Department of the Navy to rise to the highest level of responsibility that their talent and diligence will take them."

The Navy endeavors to provide every Navy man and woman with the training and experience necessary to learn a trade or vocational skill. Black Americans are now serving in every pay grade—from seaman to admiral—and in all ratings and all kinds of jobs.

Very early in this decade the Navy emphasized the fact that there is only one Navy and it is neither white, nor black, nor shade of other color. It is an organization of men and women wearing essentially the same uniform and dedicated to the same goal, defense of this nation and furthering the ideals of freedom upon which the United States was founded. The Navy and National Bicentennial years offer a golden opportunity to weld the people of the land together and rededicate all to the common goals of freedom, justice and equality, making everyone proud to be an American.

It's well to take a backward look at where we've been and understand how it all came about. But the Navy uses the past only as a building block upon which to construct the future—a future which holds hope and opportunity for all.

race relations/equal opportunity.

- A number of NROTC units have been authorized for predominantly black colleges and universities. NROTCs have also been opened to women. New programs were initiated to broaden opportunities for minority groups to earn a commission and increasing numbers of minority personnel have been enrolled in specific officer programs such as OCS, NROTC, the U. S. Navy Academy and NESEP (the Navy Enlisted Scientific Education Program.)
- All minority members are now eligible for entry into the wide range of ratings.
- Officer fitness reports include a provision for comment on the equal opportunity aspects of leadership displayed by the individual being evaluated.
- An Equal Opportunity Division has been established in BuPers to direct efforts of personnel policy toward minority groups. Included in that division is a branch tasked with the coordination and monitoring of equal opportunity programs as they affect women.
- Teams have been established and are available to visit local commands to assist in improving race relations in the command.
- All Navy members in the past two years were called upon to attend an "Understanding Personal Worth and Racial Dignity" (UPWARD) seminar race relations program. As one aspect of the program, Navy members from commands around the world enrolled in an Equal Opportunity Program Specialists (EOPS) Training Course. As a result, trained race relations specialists are available at the local level to provide consultant assistance to commands for taking positive action to eliminate racism and create equal opportunity throughout the Navy.

Minority groups have an important role as members of the Navy family, and play an integral part in its growth as "One Navy, united in purpose, striving for common goals."

The pictures below are representative of the Navy's policy of equal opportunity for all: American Indian, Mexican American, Black American, Filipino American, Guamanian American, Chinese American.

NAVAL RESERVE

Left: A citizen-sailor in the rigging of an American sailing ship in the early days of our nation. Men like this established the time-honored tradition of joining, in time of war, to serve the nation, which led ultimately to an organized Naval Reserve. Above: Samuel Chester Reid, privateersman of the War of 1812, has been described as a forebear of the modern Reservist. Below: Members of the crew aboard USS Oregon in 1898. Naval Militia units of various states, which were the predecessors of the Naval Reserve, furnished 4200 men taken into the Navy at the outbreak of the Spanish-American War. Bottom: Yale Unit, Port Washington, 1917, pioneered the modern Naval Air Reserve. Right: the Navy's only air ace of World War I, LT David Ingalls, USNR.

They are sometimes called "part-time sailors" or "weekend warriors"—in time of war, some of them have carried the label "90-day wonders." They are members of the Naval Reserve, who have performed a very significant assignment for the Navy and the nation down through the years.

In World War II, a total of almost three and one-half million Naval Reservists served on active duty, representing over 80 percent of the U. S. Naval personnel force.

Officially, the modern Naval Reserve dates back only some six decades, but the tradition of a Reserve militia to serve the nation goes back to the colonial days, before the nation itself was born—out of the determination of the 13 original united colonies.

When the Revolutionary War started, the Continental Navy was not yet in existence. But the concept of Reserve forces in the form of local militia was already an important factor in defense of the nation and the individual colonies. In fact it was a group of citizen-sailors, armed with guns, axes, swords and pitchforks, which captured a British warship, the armed schooner HMS *Margaretta*, in one of the first naval engagements of the American Revolution (see page 2).

This was a maritime nation with thousands of men who followed the sea. There were also several thousand American-owned ships, many of them already armed for protection against pirates.

Many of these ships were taken over by the various state navies or the Continental Navy, but far the greater number were commissioned by the state or the Continental Congress to operate as privateers—privately owned ships, manned by civilian crews, which were

authorized to cruise against British shipping.

Thus started the tradition of a force of civilians-in-peace-time turned sailors in support of their country during conflict. These were the early "naval reservists." They sailed in some 2000 ships engaged as privateers and their crews have been estimated at a total of 70,000 during the Revolutionary War years.

Typical of the early forbears were privateersmen Samuel Chester Reid and Jonathan Haraden. Haraden was in command of a 16-gun privateer, *General Pickering*. On one occasion, meeting a British privateer of 22 guns, Haraden boldly hailed the ship, identifying his own vessel as an American frigate. His ruse worked—the British surrendered without a shot. Shortly thereafter he met three armed British merchant ships off the coast of New Jersey. Two of them carried 14 guns, and the third carried 12. He captured them all. It is estimated that during his career he and his crew took as prizes British merchantmen carrying a total of 1000 guns.

The cargoes the privateers captured were an important source of arms and supplies for the continental forces, and the effectiveness of the privateers was soon reflected in soaring insurance rates on British shipping. Lloyds of London increased their already high premiums by 25 per cent.

As the Revolutionary War drew to a close, the Continental Navy and state navies dwindled, but the idea of a State Naval Militia, that is, the concept of naval forces in reserve, lingered on. Thomas Jefferson, as President, suggested the establishment of a naval militia in 1805, but Congress refused the necessary appropriations. Consequently, when war again broke out, there was no naval reserve of any sort.

In the War of 1812, many American seafaring men again went to war as civilians in the crews of privateers and, once again, the privateers caused serious problems for Great Britain. (One of the acts generally regarded as having precipitated that war, incidentally, involved sailors—or a shortage of sailors. In June of 1807, the British man-of-war *Leopard* attacked the U. S. naval vessel *Chesapeake* and boarded her, removing four alleged Royal Navy "deserters." Three of the four were later returned to the U. S.)

Again, when the Civil War began, there was no militia or Reserve to fall back on. Admiral David D. Porter, commenting later on the early years of the Civil War, said, "There was no Naval Militia to draw from and Union ships lay unmanned while Confederate ships were sweeping Northern commerce from the Oceans."

The Navy Department did, however, establish something like a Reserve force by an Act of 24 July 1861, which authorized the hiring of ships and crews for the "temporary increase of the Navy." The act provided for the temporary appointment of acting lieutenants, paymasters, assistant surgeons, masters and master's mates to serve during the "insurrection," as officers on "such vessels as may be deemed necessary for the temporary increase of the Navy." A total of about 7500 volunteer officers served during that war, most of them coming from the merchant service.

The Civil War saw the Navy expand from 90 ships to 670, the numbers of officers increased more than five-fold to 6700, and enlisted men grew from a force of 7500 to more than 50,000. Still, when that war ended, the Navy saw little need for a Naval Militia or Naval Reserve in the peacetime years. However, in 1873, a group of former naval officers got together to advance a plan for a Reserve Corps composed of ex-naval officers from the Civil War who could be called to active duty in the event of war. Their proposals were never acted upon, but gradually an interest in a Naval Reserve was developing.

The modern Naval Reserve movement marks its beginning from 1887. The reasons seemed to be that by that time the United States had come to the end of its continental expansion. It had become an industrial power, stimulating the export of manufactured products and import of raw materials. The crusade for a modern steam Navy was bearing fruit and the Merchant Marine was expanding.

A report by the Secretary of the Navy in 1887 pointed up the fact that the Navy, after studying the different systems of organization for coast defense and Naval Reserve in foreign countries, was prepared to formulate a plan for the United States. On 17 Feb 1887, a bill was submitted to Congress "to create a Naval Reserve of auxiliary cruisers, officers and men from the mercantile marine of the United States." It did not become law but the Navy Department in 1887 prepared a plan of organization for a naval militia force.

Finally, on 17 May 1888, the governor of Massachusetts approved an act establishing a naval battalion as part of the state militia. New York, Pennsylvania, and Rhode Island followed in 1889, and before long other seacoast and Great Lakes states also saw the need for such units. By 1897, 16 states had a naval militia in one form or another.

During the summer of 1891, the Navy Department issued an invitation to naval militia of the states to cruise with the White Squadron, the "Squadron of Evolution." Thus began the practice of militia cruises with the Regular Fleet.

At the same time that invitation was extended, there also came the first federal financial aid to the movement, when Congress passed a Naval Appropriation

NAVAL RESERVES

Act including $25,000 earmarked for arming and equipping naval militia. The Office of Naval Militia was set up in the Navy Department to administer the program and ships, material and equipment were lent to the units.

By 1894, the movement had reached the point where the Secretary of the Navy was given authority to lend each state having a naval militia one of the Navy's older ships, as well as equipment, to "promote drills and instructions."

The following year came signs that the movement had really arrived—the Naval Militia officers held their first convention.

By the time Theodore Roosevelt took over as Assistant Secretary of the Navy, the United States Naval Militia had over four thousand officers and enlisted men (the Regular Navy was not a great deal larger).

In 1898, the year of the Spanish-American War, the militiamen proved themselves an important body of trained personnel. Governors of the various states granted officers and enlisted men leaves of absence so they could serve with the Regular Navy.

On 23 Mar 1898, the Navy Department had taken steps to make use of the naval militia by organizing a "Mosquito fleet" to safeguard coasts and harbors. Late in March, the Navy Department recommissioned Civil War monitors at League Island Navy Yard. The Naval Militia sent details to man the ships. Eight monitors were commissioned and completely manned by Reservists except for the commanding officer. Later, two more monitors were recommissioned on the same basis.

After war was declared, Congress authorized the Auxiliary Navy Force, and sent militiamen to receiving ships on the Atlantic Coast and Key West, and thence to Cuban waters, where they helped man Regular ships.

Within six hours after it received notification, the First Naval Battalion of New York reported for duty—fully armed and equipped—on the auxiliary cruiser USS *Yankee*. Twenty hours after it was called, the Massachusetts unit arrived on board the auxiliary cruiser USS *Prairie* at New York.

The militia units were able to furnish 4200 of the 10,400 additional men taken into the Navy at the war's outbreak. By the time the Spanish-American War was over, 19 states were maintaining militia organizations, with a total strength of 492 officers and 6300 enlisted men.

The years following the Spanish-American War saw a growing number of active associations of "naval militiamen." There were 17 state associations and one in the District of Columbia in 1906, and more in the

next few years. A Medical Reserve Corps was established in 1912 and a Dental Reserve Corps the following year. There were also many attempts to secure Naval Reserve legislation, but it took time to work out the details. The first major step was not taken until the Naval Militia Act of February 1914, which required all naval militia states to organize their units to conform to a plan prescribed by the Navy Department. Then, on 3 Mar 1915, Congress passed the legislation which first established a Federal Naval Reserve—to be composed of enlisted men who had seen service in the Regular Navy. The response was limited, and on 29 Aug 1916, with World War I already underway in Europe, Congress passed an act establishing a new Naval Reserve Force and federalizing the Naval Militia.

During the First World War, about 30,000 Reserve officers and 300,000 enlisted Reservists served on active duty. Among them were 12,000 women Reservists who worked as "yeomanettes" in Navy and Marine Corps offices and a group of flying enthusiasts from Yale University who had bought their own planes, learned to fly at their own expense and volunteered their services to the Navy before the United States had entered the war. This First Yale Unit pioneered the modern Naval Air Reserve.

The Naval Reserve also produced our Navy's only air ace of World War I—LT David Ingalls; the first naval aviator to be credited with the destruction of a German submarine—LT H. T. Stanley; and the first Navy pilot to shoot down an enemy aircraft—ENS Stephen Potter.

Following the war, the Naval Reserve began to move closer to its present form of organization during the late 1920s and the 1930s.

By 1938, the drilling Naval Reserve numbered about 11,380 officers and enlisted men. About 19,500 others had signed up for the Volunteer Reserve, which was not required to drill, and the Merchant Marine Reserve had about 6000 officers and enlisted members.

The year 1939 saw the beginning of the war in Europe between the Allies and the Axis powers. That same year saw the beginning of Naval Reserve mobilization on a voluntary basis. On 27 May 1941, after the President's declaration of an unlimited national emergency, the entire Naval Reserve was mobilized.

World War II saw the U. S. Navy grow into the largest in history. Four out of five persons in that naval force were Reservists. The achievements of those years of conflict, in which they performed such a vital role, are told in the reports appearing on pages 29, 36 and 43.

In the three decades which have passed since 1945, the Naval Reserve has continued to serve with distinction in times of crisis. During the Korean conflict, over 130,000 Reservists from air and surface units answered the call to arms, and better than one out of four of the Navymen on active duty were Reserves. In one typical month of air operations in Korea, three-fourths of the 8000 combat sorties flown were by Naval Reserve aviators. Again, during the Berlin Crisis of 1961, 40 Naval Reserve ships were called to active duty along with their crews, and 18 Air Reserve squadrons were activated.

During the Vietnam conflict, almost one out of seven Navymen on active duty in 1967 were Naval Reservists. Six Naval Air Reserve squadrons and two Reserve Seabee battalions were mobilized in 1968 to serve for a year on active duty.

Today, in the era of the All-Volunteer Navy, the Naval Reserve plays an important role as a backup for the regular forces in time of emergency, as in the past. The Naval Reserve organization, on a continuing basis, is streamlining its training to increase its capability to augment the Fleet if the need should arise. There are some 485,000 men and women—officer and enlisted—in the Reserve component of the Navy. More than 337 Naval Reserve training centers and facilities are in operation throughout the United States, together with 30 Naval Air Reserve stations, training units and detachments.

Its membership includes more than 103,000 Reservists in a drill pay status, along with several thousand others drilling in a nonpay status. These personnel are available for mobilization with assignment to specific billets within 24 hours.

As in the past, the Reserve of today and tomorrow will be Ready.

Far left: Thousands of Reserves helped man these ships in World War II. Top left: Reservists served on the small PT boats of World War II. These boats were a constant hindrance to the Japanese and earned the nickname "Green Dragon." Left: Naval Air Reservists prepare an A-4 Skyhawk for flight, Det Cubi Point, Philippines.

FLEET RESERVE AND THE RETIRED NAVY FAMILY*—In another century, the man who spent his life in service to his country came ashore with little more than his memories, and nothing to show for his years of service. In today's Navy, the man who moves on into the Fleet Reserve or retirement has benefits that accrue to both himself and his dependents. At the same time Fleet Reservists and retirees are regarded as an important asset as well as members of the Navy family—a vast pool of expertise, knowledge and goodwill for the sea service, standing ready to be called upon in case of emergency. Many of them act as unofficial, but nevertheless valued "recruiters," encouraging their children and young friends to join the sea service to "see for themselves." Look for more coverage on this part of the Navy family in the future.*

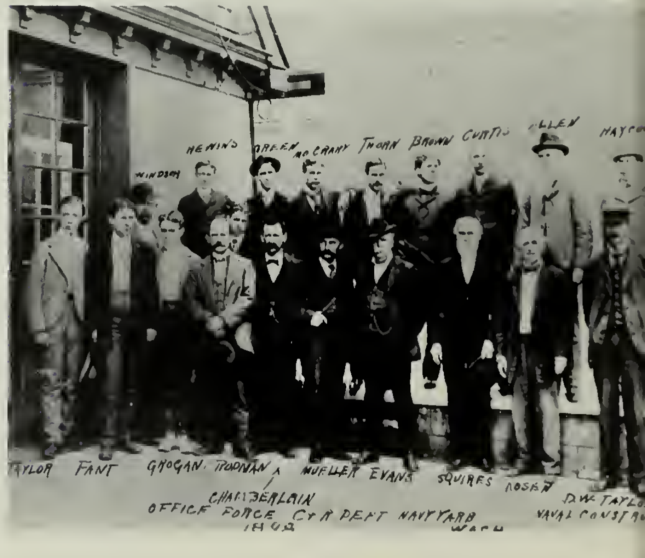
NAVY CIVILIANS

One William Faris, a dentist, diarist and a silversmith as well, came up from Annapolis, Md., one day and ". . . went and took a View of the Frigat." That was in Baltimore in the year 1797. The "Frigat" which Faris went to have a look at was USS *Constellation*, about to become the command of Captain Thomas Truxtun.

She was being built on the banks of the Patapsco River, across from Harness Creek, by David Stodder from plans and molds supplied by Joshua Humphreys of Philadelphia. The ship's figurehead and other carved work—along with that, too, of the frigate *United States*—was the handiwork of another citizen of the City of Brotherly Love, William Rush.

These then are the names of a few of the civilians to work for the Navy since the days of the Revolution. Humphreys himself had worked for the Navy in the War of Independence. Following these men through the years would be countless others, most of them now nameless and faceless, since history generally records only the names of the notable. But no matter, it is a proven fact that civilians through the years have contributed immeasurably to the success of the U. S. Navy in peace and war. It's only normal to think of the Navy in terms of men like John Paul Jones, David Farragut and Admirals George Dewey and Chester Nimitz, but one may well wonder how successful these naval heroes would have been without men who helped create or contributed to the Navy, such as John Adams (he compiled the first Navy Regs and was constantly active in promoting naval interests), Benjamin Stoddert (the first Secretary of the Navy), Robert Fulton (American inventor of a practical steamship), Gideon Welles (Civil War SecNav), and the thousands who followed them.

Before men can go down to the sea in ships to do



battle, those ships have to be constructed, tried and made ready for sea. The men who fight do so only after the scientists, researchers, craftsmen and builders come up with the tools of war with which to meet the enemy.

A navy is in large part the product of the industrial ingenuity of the nation it serves. And it resolves much more than the economic question of tax dollars and putting those dollars to use in the name of public defense. Money without craftsmen, without shipwrights, engineers and researchers, can achieve nothing.

Historically, the United States has relied on its civilian workers—in Government and industry—in times of impending trouble to produce the ships and arms needed to supply its armed forces. Shipyards since the birth of the nation have been able to adjust easily and switch from construction of merchantmen to building warships in a mere matter of weeks; these same shipyards have produced magnificent fighting ships which were the envy of every power down through the years.

Conversely, the civilian world could put to good use these same instruments of battle when peace was declared. For example, as early as 1787, the frigate *Alliance* of Revolutionary War fame was one of the first ships to enter the China trade as a merchantman. And it is apparent that the great strides aviation made in the 1950s were a direct result of the use of air power in World War II, which compressed into a few years the experience it might otherwise have taken a quarter of a century to achieve. Spawned as a product of war, atomic power has made vital inroads in peacetime for the benefit of mankind.

How does the Navy's military-civilian combination work? The Department of the Navy consists of: (1) the Operating Forces of ships, aircraft and Marine combat units—which make up the seagoing component, and (2) the supporting Shore Establishment, whose sole mission is to support the Fleet. The Operating Forces are practically 100 per cent military manned, to carry out the Navy's mission in support of national defense.

In the Shore Establishment, top management (under the Secretary of the Navy) is military. Other positions in the Shore Establishment are military for purposes of sea-shore rotation, for training, to ensure combat readiness, to provide a required military background, and to man positions at remote locations where civilians are not readily available. The rest of the Shore Establishment is made up of the civilian members of the Navy team. In addition, some manpower requirements are met under private contract.

The civilian arm of the Navy team has a low profile, essentially because the operating forces are the most visible. Behind the scenes are the thousands of civilians who provide the continuity in both support and supply. The ship's captain orders the helm hard over and rings up "emergency full" with no time to give thought to the shafts or the props. Back in Washington, a civilian engineer and his staff constantly pore over blueprints and specs, trying to make a new controllable-pitch propeller work 100 per cent of the time so that when "emergency full" is rung up on a ship's bridge, the skipper is going to get exactly what he asks for every time.

In Annapolis, Md., near the Naval Academy, another team of civilians—mathematicians—constantly work over equations and formulas which will reveal beforehand when or if a hull, gun or missile launcher will experience metal fatigue under certain sets of conditions. Down the hall, another mathematician constantly studies tables and figures in a near-lifetime of effort to reduce shipboard noise levels.

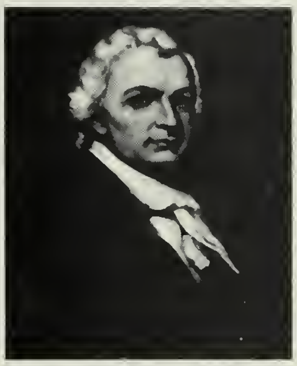
The Navy has come a long way from those first civilian shipwrights who built the six original frigates at the turn of the 19th century. For example, some 60,000 civilian shipyard workers do the majority of our ship repair and overhaul work.

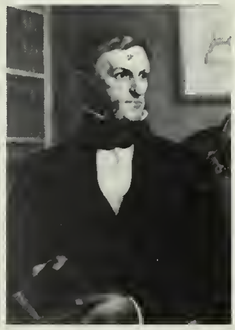
Today's Navy's military-civilian team consists of approximately 900,000 men and women of whom roughly about one-third are civilians. Their job is to support the two-thirds that make up the Operating Forces.

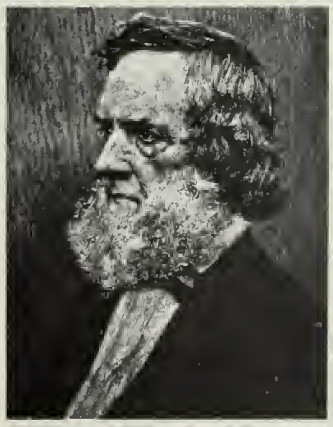
- Approximately one-half of the Navy's civilian workers have served at one time or another on active duty in the armed forces. They know, therefore, what it means to stand watch and to be on call even during off hours.

- The Office of Naval Research, the Naval Ordnance Laboratory, the Naval Research Laboratory, the Naval

Far left top, facing page: Construction of frigate Philadelphia. Far left bottom: An interior of a ship is being completed. Left top: A vessel is overhauled at Brooklyn Navy Yard in 1856. Left bottom: Civilian staff of Experimental Model basin in 1898. The model basin is now the David W. Taylor Naval Ship Research and Development Center., Carderock, Md. This page, top left: Benjamin Stoddert, first Secretary of the Navy. Top right: George Bancroft, SecNav in 1848, established the Naval academy. Bottom left: Gideon Welles, SecNav during Civil War. Bottom right: John P. Holland, inventor of first Navy-commissioned sub.







NAVY CIVILIANS

Electronics Laboratory and similarly oriented scientific and technical shore installations are overwhelmingly staffed by civilians as are several major commands. (The Naval Material Command is about 95 per cent civilian.) While their primary mission is to keep the Navy abreast of modern technology, their work frequently is given applications which improve everyday living and has an impact on the whole world community.

- With civilians serving as a large percentage of the work force, our Naval Air Rework Facilities overhaul and update our aircraft; our various types of ordnance and weapons stations do work on guns, ammunition, and other weapons systems components; and our Public Works Centers perform maintenance on real property and associated equipment. A similar situation exists in our supply warehouses, stock control points, computer complexes and other nonindustrial activities.
- Many who chart the seas are civilians. There are civilian education specialists on the Navy team, and even civilians engaged in Navy recruiting. You will also find them in telecommunications, meteorology, oceanography, and medicine.
- A small number of civilian employees even go to sea for short periods in Navy ships. They are assigned to evaluate systems with which the ship is equipped, or to serve as members of indoctrination teams on new equipment or technology. The crew that man the USNS ships of the Military Sealift Command are "civil marine personnel" who receive their paychecks from the Government.

Some members of the civilian work force have jobs that take them into areas well outside the confines of an office or the laboratory or the shipyard.

- Civilians played a leading part in the Sealab experiments and one civilian aquanaut lost his life during preliminary operations of Sealab III.
- Lest it be forgotten—the first man on the moon was a civilian employee of the government, Neil A. Armstrong. Employed by NASA, he received his initial training on active duty as a naval aviator.

A lot of action took place in the Navy's 200 years and there are thousands upon thousands of civilians—again mostly nameless and faceless—who had a hand in shaping this nation's naval traditions. Here is a random listing of some of those interesting civilians to whom the U. S. Navy of today owes a debt of gratitude. A few of them, as you will see, weren't even American and again the fact is stressed that these men *had a hand in shaping* the Navy's course through the years:

- John Adams, John Langdon, and Silas Deane—three members of the Second Continental Congress who made up the Naval Committee which actually launched the infant American Navy. The committee proposed that the colonies equip ". . . a swift sailing vessel to carry ten guns, for intercepting such transports as may be laden with warlike stores for the enemy." Rev. Dr. John Zubly from Georgia is credited with the understatement of that century (and probably the understatement for all time) when he spoke against the proposal, saying, "The people of England will take it we design to break off or separate."
- Pierre Beaumarchais—French merchant, writer and dramatist ("Barber of Seville") who, under the name of "Roderique Hortalez and Company" was the European exporter of "figs" and "dates" and other interesting supplies which were picked up all during the Revolution by American naval ships in the West Indies. In one particular instance—the Americans used most of his "figs" and "dates" (guns, bayonets and cannonballs) to win the Battle of Saratoga.
- Robert Morris—A Philadelphia merchant and a signer of the Declaration of Independence who, even though he long held out for the colonies not to separate from England, committed his personal fortune to the Revolution. Under the Articles of Confederation he was also the Agent of Marine—in effect, the head of what could be termed the Navy Department.
- David Bushnell—The Connecticut inventor who was ahead of his time with his craft which he called the Turtle. Actually it was the world's first attempt at a combat submarine. Bushnell made three "attacks"—one in New York Bay and the others in the Hudson River. They didn't succeed but by then Bushnell had another idea (powder kegs with contact triggers) which he floated out into the Delaware River. The

laws of nature constantly seemed to work against this Yankee schoolteacher; in this case, the temperature fell and ice prevented the expected fireworks from taking place.

- Benjamin Stoddert—An ex-Revolutionary War cavalry captain and a shipping merchant of Georgetown, Md., who became the first Secretary of the Navy under President John Adams. He was the one responsible for building, manning, and deploying the "new" Navy's six original frigates in the late 1790s.
- Charles Goldsborough—First example of "continuity" when it comes to civilian employees of the Navy. He started in a clerical position in the Navy Department, became "chief clerk" on 1 Apr 1802 and carried out not only administrative duties but was both a friend and adviser to members of the Navy "family." It was Goldsborough—for example—who kept Edward Preble from resigning his commission when he thought himself medically unfit for command at sea (that was *before* Preble went over to fight the pirates of Tripoli).
- John Ericsson—Swedish inventor of locomotives, engines, and propeller screws (one was fitted to the ill-fated USS *Princeton*), who built the first armored turret ship, USS *Monitor*. The U. S. thought enough of him to return his body to his native land for burial.
- Thomas Gilmer—Secretary of the Navy who was killed when USS *Princeton's* experimental 12-inch gun blew up in 1845. The accident also killed the Secretary of State, Abel Upshur, and several Congressmen.
- George Bancroft—The man who succeeded Gilmer and pushed for establishment of the U. S. Naval Academy at Annapolis. The Academy was opened on 10 Oct 1845.
- Gideon Welles—Secretary of the Navy during the Civil War, who implemented the massive blockade of the southern ports and helped plan the river gunboat assaults of that war.
- H. L. Hunley—He worked for the Confederacy in the Civil War and designed and built a submarine called *H. L. Hunley*. It wasn't the only submarine of the period—the Federals had one built by a French engineer named DeVilleroi which was called *Alligator*—but Hunley's craft was an eye-opener. She was also dangerous to sail in, sinking three times and taking almost all the members of her three crews to their deaths. Still she managed to "torpedo" and sink the Union steam sloop USS *Housatonic*. The resulting explosive wave swamped *H. L. Hunley* and she went down with her third crew (see page 00).
- James B. Eads—When Naval Constructor Sam Pook designed eight river gunboats for Flag Officer Andrew Foote, then with headquarters at Cairo, Ill., for use on the Mississippi. James B. Eads of St. Louis built those eight "Pook Turtles" which changed the course of the Civil War on the western rivers. Eads promised to build the craft in 2 months; he delivered the first to Foote in 45 days.
- John P. Holland—the Irish-born inventor of the submarine built several experimental versions, one of which, *Holland*, was commissioned by the Navy. He's been called the father of the submarine.
- Simon Lake—Actually a competitor of Holland even though they worked together at one time. Lake ended up founding what was to become the Electric Boat Company—birthplace of many U. S. Navy submarines.
- Glenn Curtiss—the West Coast builder of airplanes who offered to train one naval officer without charge as a way of assisting "in developing the adaptability of the aeroplane to military purposes." LT T. G. Ellyson was ordered to report to the North Island (San Diego) Curtiss Aviation Camp on 23 Dec 1910.

One could well wonder how many dedicated individuals have given a large part of their working lives to the service of a Nation and the U. S. Navy. The list would indeed be long since it covers the entire 200-year span of the naval service.

—J. F. Coleman

Facing page: Civilian worker adds finishing touches to propeller of USS Dixon (AS 37). Left: USS Spruance, under construction at commercial shipyard, points up role of industry in cooperation with the Navy. Below: Naval shipyard employees await arrival of ship in drydock.

Where 200 Years of History Come Alive

NAVY MUSEUMS

Above: Entrance to Battleship Alabama Memorial Park in Mobile, Ala., where USS Alabama and USS Drum are berthed.

The word museum comes from the Greek word "mouseion" meaning "temple of the Muses," a place of thought and study. Today's version of the word can mean a place where a person can get lost in a time machine, a place where history can come alive. So it is with the many and varied nautical museums which are located in every part of America.

Naval history, of course, plays a large role in the makeup of these museums. The 200 years of history which the Navy has experienced have offered much in the way of documents, weaponry, ships and other significant memorabilia which are now displayed in these museums.

The history of the United States Navy is an exceptionally fascinating one. For the person with an inquiring mind, or for one who simply wants to spend an entertaining hour or two, a naval museum is the place to go. Chances are there's one nearby.

The following is a rundown of some of the nautical museums in operation around the country and what you are likely to see there. It is by no means complete. If there is a museum that you think is of interest to the members of the Navy family, write and tell us about it. We'll try to cover some of the other Navy-oriented museums in a future issue.

- USS *Alabama* (BB 60) is a good example of a battleship which is now a museum. Located in the *Battleship Alabama Memorial Park* in Mobile, the ship stands ready to show tourists what life was like on and 'tween decks of one of World War II's big fighting machines. *Alabama* was built in 1942 and joined the British Home Fleet in the North Atlantic that same year. She continued her service both in the Atlantic and Pacific until the end of the war, winning nine battle stars. She was decommissioned in 1947 and became a state shrine in 1965.

Tied up alongside her is the submarine USS *Drum* (SS 228); she was constructed in Portsmouth, N. H., in 1941. *Drum* saw action in the Pacific during World War II, completing 13 patrols and sinking 15 enemy ships.

- There is a unique collection of relics at the *Naval Academy Museum* in Annapolis, Md. More than 55,000 items are on display in the collection which was started in 1849, four years after the academy opened, making it one of the oldest museums in the nation. It houses the Henry Huddleston Rogers collection of 108 ship and small boat models and collections of historical marine paintings by many artists including Edward Moran, an English-born painter.

In addition to its paintings and ship models, the Naval Academy Museum has collected many pistols, rifles, muskets, swords, cutlasses and other lethal weapons, both ancient and modern. Not all the museum's possessions are in the museum building itself. There are many in Bancroft Hall, the midshipmen's dormitory, with its Memorial Hall and reception area.

- The oldest existing U. S. Navy ship, the sailing frigate *Constellation*, is today tied up in the Chesapeake Bay at the port of Baltimore, Md. *Constellation* was built in Baltimore under the direction of Major David Stodder and commissioned in 1797. She is considered by many to be the oldest ship in the world continuously afloat. There are many displays of interest aboard, including early Navy relics and memorabilia of Commodore Charles Stewart.

- Farther north from *Constellation*, berthed in the Boston Harbor, is the oldest ship in the Navy which still retains a commission—USS *Constitution*. Popularly known as "Old Ironsides," she received her commission in 1797, also, and saw service during the Tripolitan War and in the War of 1812.

Constitution's best-known battle was her victory over the British vessel *Guerriere*. She has undergone two complete rebuildings, once in 1833 and again in 1927-1931. After that last rebuilding, she visited 91 ports around the U. S. She is currently in overhaul, but is scheduled to be on display for the nation's bicentennial celebration. Her wooden decks, tall masts and extensive rigging give visitors a good idea of what life on board an 18th century warship was like.

- In another part of the state, USS *Massachusetts* (BB 59) is one of several ships tied up at Battleship Cove in Fall River and gives visitors a good idea of life on a 20th century warship. Making her last voyage in 1965, she entered the harbor at Fall River to serve as a memorial to those who gave their lives in the service in World War II. The 35,000-ton ship was completed in 1942 in Quincy, Mass.

Massachusetts' war service included 35 major naval engagements during which she earned 11 battle stars. The area open to visitors covers seven decks and includes the 16-inch turrets, galleys and conning tower, with additional sections opened periodically. The complete tour takes about two hours. The submarine *Lion Fish*, the destroyer *Joseph P. Kennedy, Jr.*, and the bow section of the cruiser *Fall River* complement the battleship.

- Even if you're a thousand miles away from an ocean, you can still see a naval ship. Docked on the Mississippi River waterfront in St. Louis, Mo., is USS *Inaugural* (MSF 242). Launched in October 1944 and commissioned later that year, *Inaugural* served in the western Pacific during 1945 and participated in the Okinawa campaign. After the end of the war, she engaged in minesweeping operations in the waters around Japan and Korea. She was decommissioned in 1946 and assigned to the Atlantic Reserve Fleet. Various areas of the ship are open to the public to give one a look at one of the Navy's smaller war vessels.

- The *South Street Seaport Museum*, located near the waterfront in lower Manhattan, New York City, has one of the most interesting and extensive nautical collections in the nation. There are displays of New York's maritime history—including the many important parts New York Harbor has played in the nation's wars—as well as photos, paintings and ship models.

Eight vessels at Pier 16 near the museum are also on display. The three-masted iron-hulled sailing ship *Wavertree* is the largest; other ships include the schooner *Caviare*, light ship *Ambrose*, steam tug *Mathilda*, and ferry *John Lynch*. The South Street museum is a must for New York visitors interested in maritime history.

- The USS *North Carolina Battleship Memorial* is located on the west bank of the Cape Fear River in Wilmington, N. C. The battleship herself was built in 1941 and served throughout the Pacific during World War II; in 1961 she was brought to Wilmington as a memorial.

Two of her three 16-inch gun turrets can be visited as well as one engine room, small gun mounts, living areas and conning tower. Nearby is the restored *Kingfisher* float plane. The memorial area also features an outdoor "Sound and Light" drama for visitors during the summer.

- The importance of the Great Lakes in the history of the U. S. Navy is exemplified by the presence of USS *Niagara*, now at Erie, Penn. USS *Niagara* was one of six small war vessels built on the shore of Lake Erie to provide a naval force against British squadrons operating on the Great Lakes during the War of 1812. In the Battle of Lake Erie, the ship was Commander Perry's second flagship.

Niagara is a square-rigged warship of 34 guns. She was reconstructed in 1913 and is now the property of the state of Pennsylvania. Adjacent is the prow section of USS *Wolverine*, the first iron warship of the U. S. Navy on the Great Lakes.

- No other city in America is richer in American history than Philadelphia. Although located far inland on the Delaware River, Philadelphia is actually a port city, and many important events in naval history occurred there. It isn't surprising then that Philadelphia has three major museums devoted to nautical history.

- Founded in 1960, the *Philadelphia Maritime Museum* traces man's nautical history from the time of early sailing ships to the present day, with emphasis on the maritime heritage of the Delaware River Valley. There is an outstanding display of ship models, prints, paintings and nautical artifacts. Other displays cover early naval history. The Underwater Museum Gallery covers exploration of the depths. Another exhibit is the one-man research submarine *Star I*.

- *The Army-Navy Museum*, located in the reconstructed Pemberton House, may be found in a section of the Independence National Historic Park in Philadelphia. The section is known as Carpenters' Court which, in the 1775-1800 period of our history, was the equivalent of the Pentagon of our fledgling nation. The Army-Navy Museum offers panoramic and dioramic "living" displays and exhibits dramatizing the birth of our Navy.

- USS *Olympia*, docked in Philadelphia harbor, is the last survivor of the "new Navy" of the 1880s and 1890s. She was launched in 1891 at San Francisco and commissioned in 1895. During the Spanish-American War, *Olympia* was Commodore Dewey's flagship at the battle of Manila Bay. After service in World War I, she was decommissioned.

Several areas of the ship can be visited, including Admiral Dewey's quarters. On exhibit are naval uniforms, medals, flags, ship models, and relics of naval history.

- Although never in the American Navy, HMS *Rose*, a 20-gun British frigate now berthed at *Fort Adams State Park* in Newport, R. I., has an important place in American naval history. This ship is a full-size replica of the one which took part in the blockade of

American ports during the Revolutionary War. HMS *Rose* was launched in 1970 in Nova Scotia and below the main deck is a maritime exhibit with 20 ship models, a collection of nautical items and colonial military exhibits.

- *Texas* is another state which has played an important part in naval history. Texas was the first state to preserve its namesake battleship. The ship rests in a special slip off the *Houston Ship Channel* and is reached by a bridge from land. Completed in 1914, she was the last major fighting ship to use reciprocating engines.

After extensive service during World War II, *Texas* was placed in her permanent berth in 1948. The Admiral Nimitz Room and Cruiser Houston Room in the ship contain exhibits of note. Other displays honor the Texas Navy, which was active when Texas was fighting for its independence from Mexico.

- *The Fleet Admiral Chester W. Nimitz Memorial Museum* is located in Fredericksburg, Texas. It is located in a former hotel built by Admiral Nimitz's grandfather. Admiral Nimitz's personal collection of historic artifacts, documents and other memorabilia are located in the museum.

- Docked near Pelican Island in Galveston, Tex., is USS *Cavalla*, a submarine which made six patrols before the end of World War II. Her torpedoes sank the large Japanese aircraft carrier *Shokaku* for which the ship received the Presidential Unit Citation. In later years she was outfitted as a killer submarine with sophisticated electronic equipment to detect and destroy enemy underwater craft. A submarine warfare display has been set up near the ship.

- A must for anyone interested in naval history and in the Newport News, Va., area is the *Mariners Museum*. Founded in 1930 by Archer M. Huntington, the museum features the most extensive nautical collection in America. International in scope, the exhibits cover many areas of the history of man's conquest of the sea. More than 1000 models show the development of water transportation.

The painting and print collection contains 14,000 items which provide for frequently changing exhibits in the nine galleries. Among other nautical items are displays of ship decorations, navigation instruments, naval weapons and figureheads. Many small craft can be seen outside the main building.

- Not far away, the *Portsmouth Naval Shipyard Museum* portrays the history of the nation's oldest naval shipyard, the Portsmouth area, and the armed services of the region. Ship models, uniforms, arms of all types, from early muskets to the *Polaris* missile and various naval memorabilia are on display. The feature attraction is a model of CSS *Virginia* (originally USS *Merrimack*) the nation's first ironclad. More than 35 models of ships, many of which were built at the naval shipyard, are on display.

- Tied up at the Bremerton, Wash., Naval Shipyard is one of the Navy's prized possessions, USS *Missouri* (BB 63), site of the Japanese surrender at the end of World War II. Though the ship is in reserve, visitors can still visit the surrender deck. *Missouri* served on duty for more than 10 years before going into the Reserve fleet in 1955.

Manitowoc, Wis., was the site of much of the submarine construction that took place during World War II, and the maritime museum now there reflects it. The submarine collection includes 28 undersea craft built during that war. The museum also features collections on the maritime history of the Great Lakes region. The submarine *Cobia* is open to the public.

- In Florida, the *Naval Aviation Museum* in Pensacola shows the growth and heritage of the Air Navy from its beginnings in 1911 to the era of space flight. Hundreds of displays and exhibits for the museum have been shipped from naval air units throughout the world. Such a one is the F4B-4 fighter used by the Navy from August 1929 to the mid-1930s. Later it was used as a trainer through 1941. For a detailed article on what the newly dedicated Naval Aviation Museum has to offer, see the April 1975 issue of ALL HANDS, page 2.

- On the West Coast at *NTC San Diego, Calif.*, another Navy museum contains many historical objects from the early seafaring days. There is a detailed replica of HMS *Victory*, Admiral Lord Nelson's flagship, which was presented to the Navy several years ago by a film producer. Near *Victory* is the eight-foot model of the cruiser USS *San Diego*. Originally the ship was commissioned *California* in 1907, but the name was changed in 1914.

Other displays feature officer and enlisted uniforms that date back to the early 1900s, a bell that rang on board the old *Yorktown*, an old Spanish cannon and shot, and panoramas of the history of the U. S. Navy. There is also a 30-star flag from the sloop-of-war *Kearsarge* which was engaged in actions against the Confederate Navy during the Civil War.

- The Seabees, too, have their own special museum,

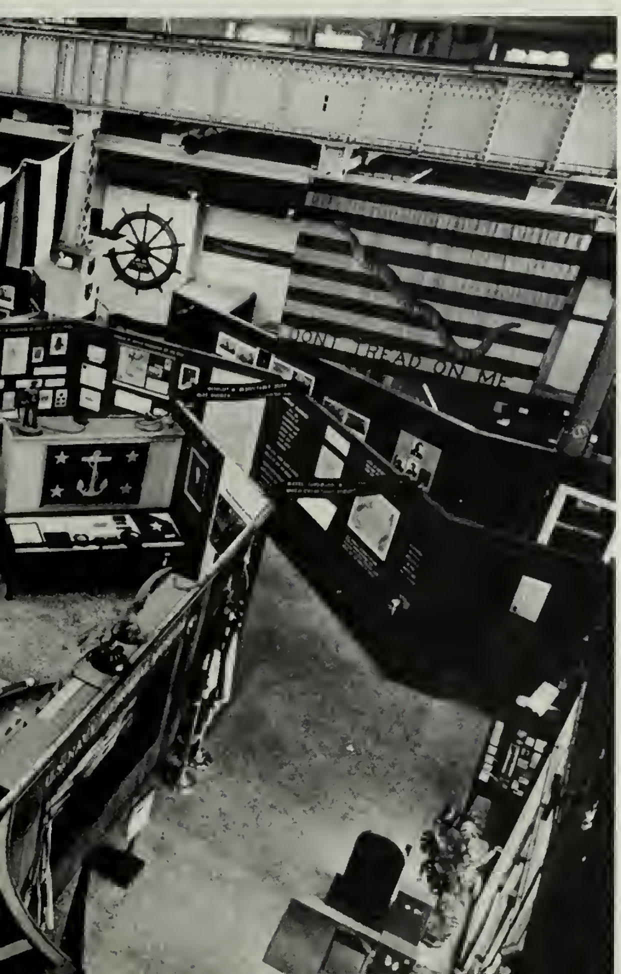
and it couldn't be in a more fitting place than *Port Hueneme, Calif*. There, too, is contained much of the memorabilia of the 100 years of the Navy Civil Engineer Corps. The main building has an extensive set of German battleflags, Japanese swords and Viet Cong weaponry, plus dioramas depicting some of the Seabees' large construction feats.

One of the most prized possessions in the museum is a six-foot mahogany crucifix which was hand-carved by CM1 H. M. Coe. It is displayed in a small room set aside as a chapel dedicated to the memory of Seabees who have lost their lives while serving their country. A number of sculptures by Felix de Weldon, a World War II Seabee and world-famous creator of the Iwo Jima monument, are also on display.

- Another area with a lot of Navy history and consequently an abundance of navy and nautical museums is that around Washington, D. C. The *Navy Memorial Museum*, located at the Washington Navy Yard, is filled with so much history that it could keep a visitor busy for many days. The largest institution of its kind in the country, the museum contains more than a football field full of paintings, flags, displays, dioramas, ship and plane models, documents, and other memorabilia.

The museum itself is located in a historic area. The building which houses the museum once served as a breech mechanism shop in the manufacture of large naval guns. The first Japanese diplomatic mission to the United States landed in Washington near the present site of the museum, and it was near the building's front door that John Surratt landed after Egypt extradited him for complicity in President Lincoln's murder. Charles Lindbergh stepped ashore at the Washington Navy Yard after his return from his famous trans-Atlantic flight to France.

Below: Overhead view of part of Navy Memorial Museum located at Washington Navy Yard.



In Willard Park, just outside the museum's front door, stands a line of rifled 100-pounders taken from the ironclad ram *Tennessee* which was called "the most powerful vessel ever to fly the Confederate flag." Even now, more than a century later, the guns look formidable. It was the torpedoes (mines) from this ship which Admiral David Farragut damned into history when he decided to steam full speed ahead into Mobile Bay, capturing it for the Union.

- Just a few blocks from the White House in Washington is the *Truxtun-Decatur Naval Museum*. This museum was opened in 1950 and is located in the carriage house adjoining the historic home of Stephen Decatur, one of the Navy's early heroes. The exhibits there cover the Merchant Marine, U. S. Marine Corps and Coast Guard in addition to the U. S. Navy. The displays are changed periodically but include many ship models and paintings of historical events.

- The Smithsonian Institution's nautical museum is another good place in which to take in a lot of the nation's naval history. Located in the Museum of History and Technology on Constitution Avenue in Washington, the exhibit has two parts—the Hall of American Merchant Marine and Armed Forces Hall. In the merchant marine display, one can see a collection of more than 175 of the world's finest ship models and can trace the evolution of shipping from the Revolution to modern times.

The Armed Forces Hall displays models of fighting ships as well as collections of naval arms, uniforms and other memorabilia. The prize exhibit is the gunboat *Philadelphia*, built in 1776 and sunk at the Battle of Valcour Island on Lake Champlain. Raised in 1935, it has been restored and is now on display.

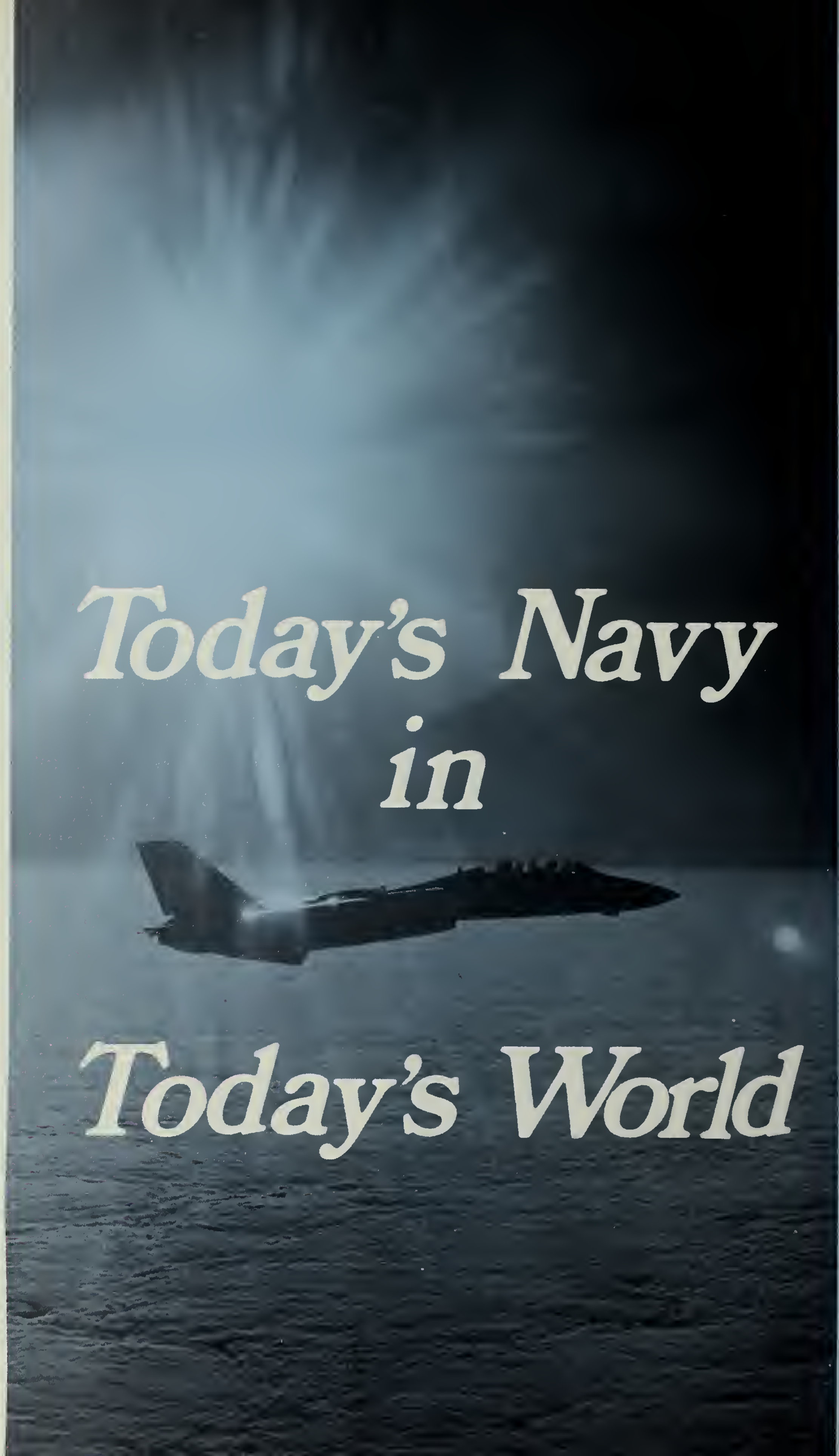
- USS *Yorktown* (CVS 10), the "Fighting Lady" of World War II, is slated to become a national shrine and Navy museum at Charleston, S. C. She will be preserved by the Patriot's Point Development Authority of South Carolina, a nonprofit state agency, and will be the first carrier ever donated to such an agency. The 40,000-ton, 872-foot-long ship was towed to Patriot's Point from the inactive ship maintenance and storage facility, Bayonne, N. J., earlier this year.

- *A Bicentennial Navy and Marine Corps* museum is scheduled to open at the Twelfth Naval District Headquarters Building, Treasure Island, San Francisco, Calif., as part of the ComTwelve celebration of the Navy's and the Nation's 200th birthday. The museum will display ship models, photographs, documents, military uniforms and other historical items. Museum doors are scheduled to open to the public on 1 Oct 1975 and remain open through 1976. There is a possibility that it may become permanent.

Nautical museums, then, are not in short supply in this nation which is rich with naval history. It would be altogether fitting that in this year of the Navy's 200th birthday, you should spend some time in the one nearest to you. Who knows what dramatic moment in history will come alive for you there.

—JO2 Jim Stovall

Today's Navy in Today's World



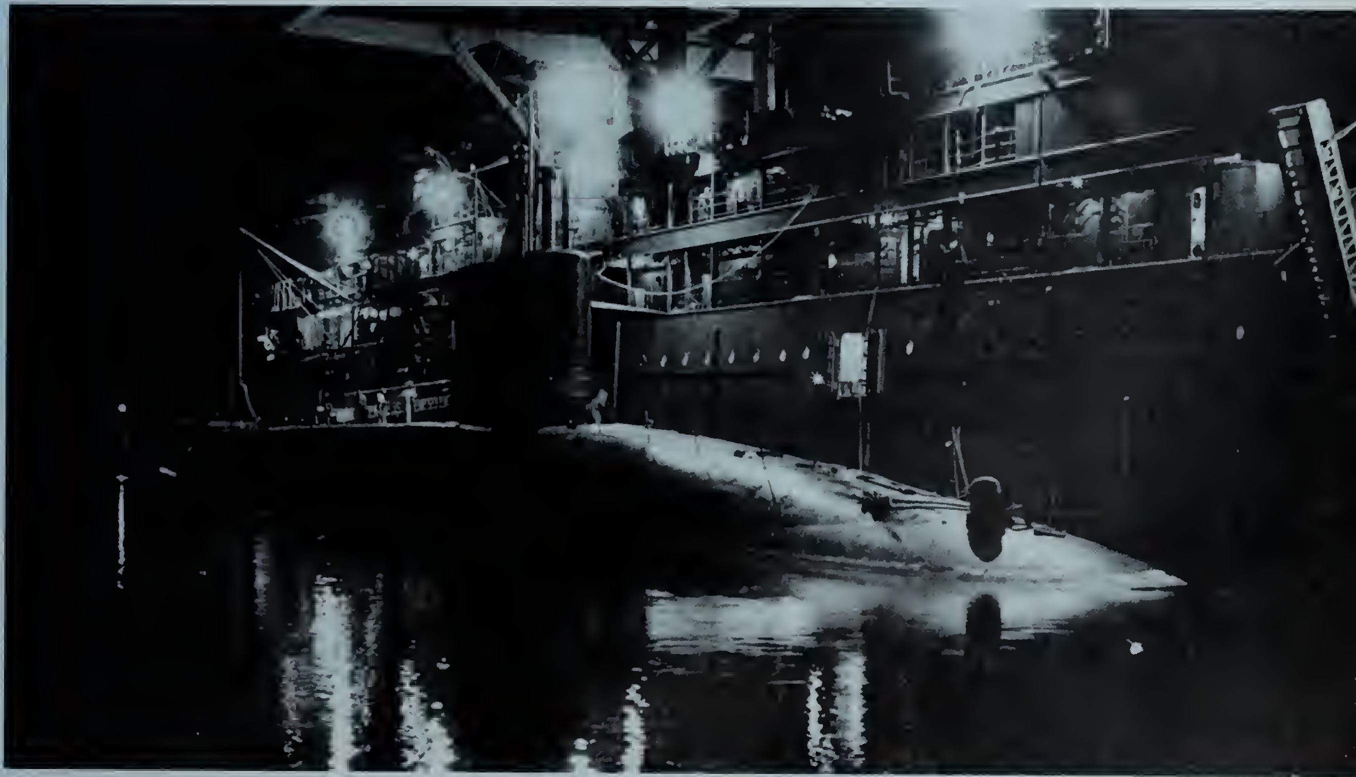
When our Navy was first getting underway, U. S. sailors went to sea in wooden ships driven by the wind. They fought with brass and iron cannon and cutlass, lived under spartan conditions, spent seemingly endless months at sea, and got precious little compensation for it all. Obviously, things have changed. The electronic, supersonic, nuclear Navy of 1975 has, by necessity and design, come a long way in the past 200 years.

Ships have changed dramatically. Wooden hulls, billowing sails and brass and iron cannon have given way to steel and aluminum, computers, nuclear energy and electronic weapons. Compare today's ships with those of the Continental Navy—the recently commissioned USS *Nimitz* (CVAN 68), for example, is a far cry from the frigates of 1775. Four and one-half acres of flight deck cover her 1092-foot length and 252-foot breadth. Her two nuclear reactors can push her 94,000-ton mass through the water at speeds in excess of 30 knots. She will not have to be refueled for 13 years, making her completely independent of fuel logistic support. (Her reactors will provide fuel equivalent to about 11,000,000 barrels of oil during that period.) *Nimitz* is so big she can accommodate 6286 men, including an air wing of 100 planes.

Compare also a modern Ballistic Missile Submarine such as USS *Lafayette* (SSBN 616). At 425 feet long and 33 feet wide she has roughly the same dimensions as a colonial frigate, but any similarity stops there. *Lafayette* is capable of remaining submerged on patrol for weeks at a time (see page 39) thanks to her nuclear power. She can hurl her sixteen, 34-foot-long, 65,000-pound *Poseidon* missiles 2500 nautical miles to hit a target on the dime.

Navy ships of today are also being developed which can skim over the oceans at speeds and with maneu-

Facing page: F-14A Tomcat. Above: Commissioning of USS Valdez (FF 1096). Below: USS Ulysses S. Grant (SSBN 631) tied alongside tender.



verability our naval forefathers didn't even dream about. These are ships like the patrol combatant missile (hydrofoil) ship USS *Pegasus* (PHM 1) whose gas turbine engine lifts her hull from the water on hydrofoils and drives her to 40-knot speeds. They are ships like the surface effect ships which ride on a cushion of air and, with 100-ton displacement, can hit an incredible speed. (One of them has achieved a world record of greater than 80 knots.) A 2000-ton SES is being developed (its preliminary design has already been completed) and hydrofoil ships are being refined.

Methods of naval warfare are also a far cry from Revolutionary War days. Broadsides, boarding parties and sharpshooters in the fighting tops are gone. Modern Navy ships would seldom even see each other in wartime, carrying the battle to the enemy underwater in submarines, or in the air with the Mach II, an F-14 *Tomcat* now being introduced to the Fleet, or with missiles like the 31-foot-long, greater than 60-mile range *Talos*. The fast new patrol frigates that will be entering the Fleet in the late '70s will be equipped with LAMPS helicopters, *Harpoon* missiles, torpedoes and the rapid-fire 76-mm gun.

Shipboard living conditions have also vastly improved since the days of wooden ships—and even within the past decade. Sailors no longer live out of a seabag and sleep in hammocks slung from the overhead. The modern Navyman's needs for comfort, privacy, self-respect, health, recreation and social interaction are being met.

The 1975 sailor in the new *Spruance*-class destroyer, for example, sleeps in a modern design aluminum berth with a comfortable four-inch-thick foam rubber mattress, privacy curtain, reading light and individual

Top: SH-2F Seasprite helicopter serves important role in LAMPS system. Left: A bulbous sonar dome and sleek knife-edge bow of USS Spruance (DD 963) are characteristic of this class of ships. Below: Frigate USS Barbey (FF 1088) underway. Facing page bottom: Tank landing ship USS Spartanburg County (LST 1192) lowers ramp onto causeway.

ventilation. Berths are grouped in the compartment for the greatest privacy and comfort, and each man has a locker to keep his personal belongings secure and neat.

The interior of a modern American ship is air-conditioned and living, eating and recreation spaces are brightened with cheerful, coordinated colors, nonglare lighting and modern, easily cleaned, flame-resistant materials. For his off-duty hours, the modern sailor has a crew's lounge furnished with comfortable easy chairs, writing and game tables, commercial and shipboard closed-circuit TV, stereo, carpeting and draperies or paneling. He also has onboard a gym, library, post office, hobby shop, store, snack bar, barbershop, laundry, medical and dental facilities.

All this is to lift morale and help ease the hardships of life at sea, which in spite of the frills, is still both demanding and challenging. Working in a modern Navy ship no longer means going 100 feet aloft in a hurricane to reef sail, but it does still mean long hours of work and training to develop new skills, drills, watches, and ship's upkeep. However, in the area of ship maintenance, much of the work that was common in the past has been reduced or eliminated. *Spruance* ships have rust-proof aluminum superstructures and new protective paints. Fast disappearing is the endless polishing of bright work. *Spruance* ships have also eliminated many long, tedious watches such as those in the engineroom needed to constantly monitor gauges—computers will now do these jobs.

These are some of the vast improvements in ship design, weapons and shipboard life made since the Navy was launched in 1775, but perhaps the greatest and most important changes have come in the compen-

At right from top to bottom: 100-ton Surface Effect Ship (SES 100B) during trial run. Newly commissioned nuclear-powered attack aircraft carrier USS Nimitz (CVAN 68) underway. Crewmembers wait to hoist union jack during commissioning ceremonies of USS L. Mendel Rivers (SSBN 686). USS South Carolina (CGN 37) is in background.

sations and opportunities available to sailors.

Two hundred years ago a boy enlisted in the Navy for a handful of dollars and a daily ration. Even at the turn of this century a sailor's pay left something to be desired. The pay table in 1902 shows a seaman third class receiving $9 per month, a petty officer second class earning $35 and a chief petty officer entitled to $70 a month—plus allowances. By comparison, today's recruit *starts* at $344.10 per month along with numerous other monetary benefits, which may include basic allowances for quarters, subsistence and uniforms. He may also draw sea pay, special and hazardous duty pay and overseas pay. A chief petty officer with eight years of service draws $702.30 a month in basic pay, plus the allowances to which he is entitled.

But money is not the sailor's only compensation. He also has many training benefits which help him in his naval career. In the old days, a young man went to sea and learned to be a sailor, and little else. If he was lucky he might be chosen for training in gunnery or signaling, or, after being aboard for a while and having shown potential, might be chosen (rarely) as a midshipman. By and large, though, a man went to sea before the mast and stayed there for the rest of his seagoing life.

Today, the Navy offers training in about 70 different ratings and many more subspecialties. Through on-the-job training, formal Navy schools and correspondence courses the enlisted person can learn the skills of such jobs as navigation, computer programming, electronics, mechanics and construction. Few other jobs offer the opportunity (an equal opportunity for all) to get into so many different areas, some in glamorous fields like nuclear power, space technology and oceanography.

Professional education is not the only education available. Personnel are encouraged to pursue off-duty education in local civilian schools as well. To assist them in meeting expenses, they have the Tuition Aid Program, which pays up to 75 per cent of tuition costs; the GI Bill, administered by the Veterans Administration and the Program for Afloat College Education (PACE) on board ship. All this the Navy offers as elements of the broad opportunities for higher education known as the Navy Campus for Achievement.

Commissions are more available to enlisted people today through Navy programs such as Officer Candidate School, The Navy Enlisted Scientific Education Program (NESEP), the Navy Enlisted Nursing and Dietetic Programs (NENEP and NEDEP), Naval Academy Preparatory School and the U. S. Naval Academy. Today, about one in six officers on active duty advanced from the enlisted ranks, most likely through one of these programs. That is, over 15 per cent of the officers in the Now Navy are former enlisted personnel.

Promotions within the enlisted ranks are more open as well. In the sailing Navy, getting beyond the deck

It's people who make today's Navy. Left from top to bottom: Crewmen still paint—this time it's USS Valdez (FF 1096), newly commissioned frigate. On-the-job training at sea provides instruction in the operation of Pelorus. Below: Seabee David A. Murphy at work in Puerto Rico. Facing page top left: Crewman checks gas turbine engine on board destroyer USS Spruance. Top right: Navy recruiter, Master-at-Arms 1st Class Ella Black. Center: A time for reflection. Bottom left: Instructor at patternmaker-molder school checks a student's project. Bottom right: A sextant reading is taken aboard a Navy ship.

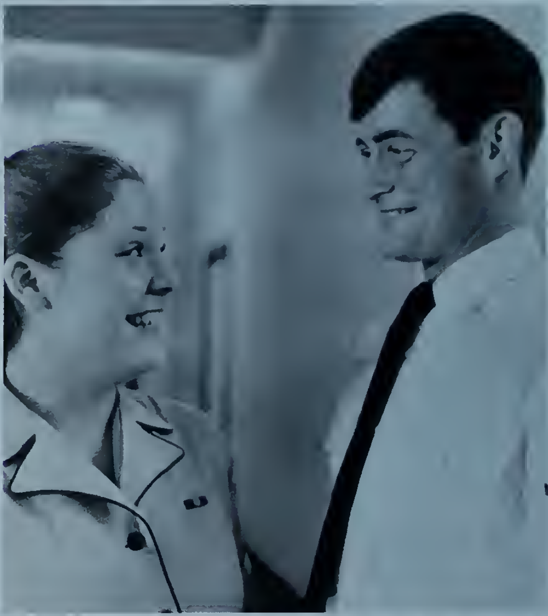
force was a long, tough haul, requiring many years of arduous work. The few men who had some education, or were lucky, might have made petty officer, but that was a long shot and relatively few did it. Today, promotions are both equitable and more rapid, although they take a lot of study and hard work. A seaman now is able to make third class petty officer after just two years' service.

Not only is the individual Navy member provided for today, but his entire family is looked after, something unheard of 200 years ago. Dependents (see page 76) have the advantage along with their sponsor of such benefits as medical care, legal aid, use of Navy recreation facilities, commissaries and exchanges. In addition,

they receive the benefits of reduced insurance premiums through SGLI, Navy credit unions, the Navy Relief Society, tax advantages, scholarships for eligible dependent children and travel, to name a few.

From two small sailing ships in 1775 to the world's most modern Fleet in 1975—that's the progress the United States Navy has made by its bicentennial year. We can only anticipate the advances appearing on the horizon and the promises of the next two decades—to say nothing of the Navy's tri-pronged role, on, over and under the seas, as it celebrates its tricentennial year a century ahead.

—JO1 Tom Jansing



Upper left: Mexican-American Fireman Apprentice Arturo Marmelejo checks log aboard USS El Paso (LKA 117). Left: Crewman assists pilot in cockpit of F-14A Tomcat. Above: Members of the Navy team. For color painting at right see page 1.

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

ORIGINAL ARTICLES and information of general interest may be forwarded addressed to the Editor, ALL HANDS, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, 2221 Jefferson Davis Highway, Washington, D. C. 20360.

DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for approximately six naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.

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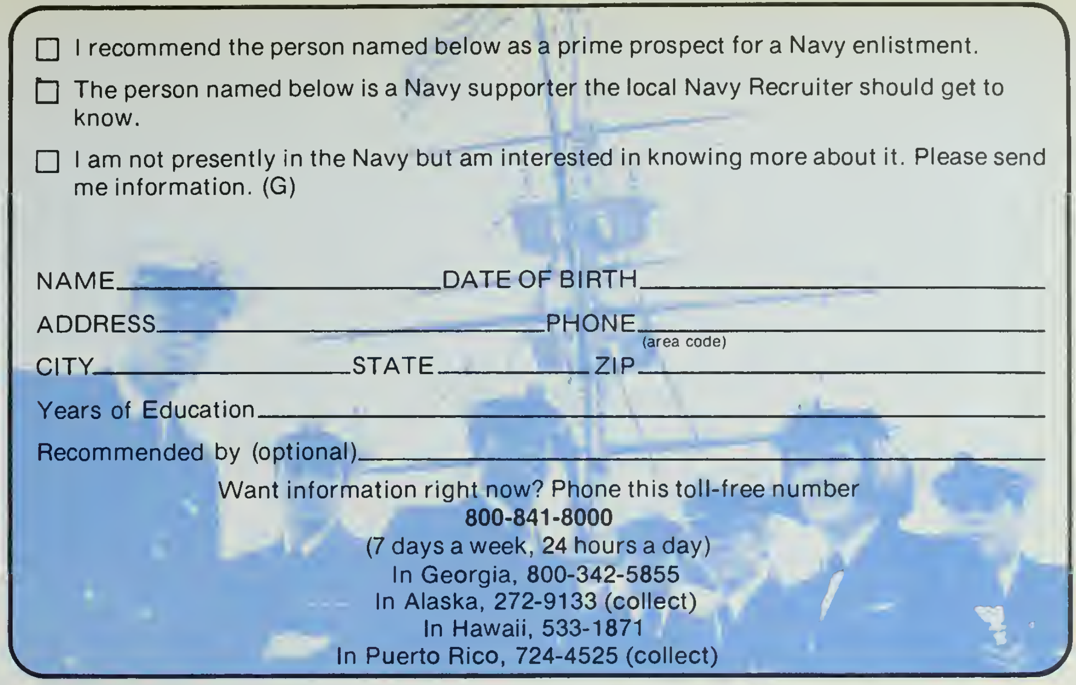

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A LOOK AT THE SOVIET NAVY

SEPTEMBER 1975

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ALL HANDS

MAGAZINE OF THE U. S. NAVY — 52nd YEAR OF PUBLICATION

SEPTEMBER 1975 NUMBER 704

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Left: A Patrol Squadron 17 (VP 17) P-3B Orion patrol aircraft in flight in the vicinity of the Soviet Fleet replenishment ship Vladimir Kolechitsky.

FRONT COVER: When U. S. Navy warships entered the port of Leningrad and Soviet Navy warships entered the port of Boston on exchange visits, viewers had the unusual experience of seeing the flags of these two sea powers flying together. For more on these visits and a "Look at the Soviet Navy," see the following pages.

BACK COVER: The decorative presentation featuring the theme of the United States "Doing Business at the Same Location for 200 years" is

SOVIET SHIPS VISIT BOSTON

Soviet warships made a port visit to the United States on 12 May for the first time since World War II.

While USS *Leahy* (CG 16) and USS *Tattnall* (DDG 19) were calling at Leningrad, the Soviet destroyers *Boyky* and *Zhguchy*, both *Kanin*-class DDGs, steamed into Boston harbor for a six-day stay. As they arrived they exchanged salutes with an Army National Guard battery on Castle Island and then with USS *Albany* (CG 10), which had arrived the day before. *Albany* was flagship of Vice Admiral Stansfield Turner, Commander of the U. S. Second Fleet.

This exchange of ship visits was part of the activities scheduled by the United States and the Soviet Union to commemorate the 30th anniversary of the end of World War II in Europe, V-E Day. As such it was an exceptionally smooth and successful operation.

In his remarks upon arrival in Boston, Admiral Turner set the tone of the week's events, saying, "I look on this as a very normal activity—an exchange visit of warships between two countries who have friendly relations."

The Soviets' schedule was crammed with engagements designed to give them the broadest possible view of the American way of life. The formality of initial courtesy calls between Rear Admiral A. M. Kalinin, the task group commander, and local military and political dignitaries quickly dissolved into friendly relaxation as a full social schedule took effect.

Beginning with receptions in Boston and at the South Weymouth Naval Air Station on their first day in port, the Russians soon entered into the spirit of informality and personal contact which characterized their stay. Throughout the week, a continuing series of exchanges among the officers and men of *Boyky*, *Zhguchy* and *Albany* permitted U. S. and Soviet navymen a unique insight into shipboard routine and living conditions of their counterparts. Highlight of these activities was a midweek dinner aboard *Albany* for a large contingent of the Soviet crews, after which the visitors staged a display of traditional Soviet dances on *Albany's* fantail.

Few could have predicted the interest the visiting ships elicited among the citizens of the city. It was sustained and intense. During the 14 hours of total public visiting, *Boyky* and *Zhguchy* attracted an estimated 40,000 curious Bostonians. In fact, visiting was extended two hours on the last day to accommodate the crowds.

Invitations poured in from local organizations and citizens, offering everything from barbecue dinners to chess matches, most of which had to be declined because of a hectic schedule. Nevertheless, the Soviet sailors had numerous opportunities to observe local events and see places of interest at firsthand. Their itinerary included tours of Boston's Freedom Trail, the New England Aquarium, the Museums of Science and Fine Arts, Boston University, M. I. T., the circus and a Red Sox game at Fenway Park.

One tour bus stopped at a fast-food chain store where the visitors were treated to a free lunch. And above all, the Soviets were granted liberty throughout the week which afforded complete exposure to the city of Boston. The personal contacts with the public generated by general ship visiting and Soviet in-port liberty seemed uniformly friendly and warm.

The degree of popular interest in the Soviet ships ran parallel to that of the media. Virtually all major New England newspapers and television stations ran daily reports of the progress of the visit and local radio stations covered it almost hourly.

Admiral James L. Holloway III, Chief of Naval Operations, paid a courtesy call on Rear Admiral Kalinin aboard his flagship, *Boyky*. This and the arrival of Soviet Ambassador A. M. Dobrynin at the outset of the port call, provided extra interest by the area's media.

Net effect of the six-day Boston visit was to provide the visiting sailors and their hosts with a valuable insight into each other's way of life.

Facing page top: Photographers film a Soviet sailor on fantail of Soviet guided missile destroyer Boyky. Left: Members of the Massachusetts National Guard stand by to fire salute as Soviet destroyer Boyky enters harbor. Below: The Commander Second Fleet, VADM S. Turner, waves as the Soviet ships make their departure from Boston harbor.

US NAVY SHIPS VISIT USSR

"Fantastic," is the word most sailors of the Norfolk-based USS *Leahy* (CG 16) and the Mayport-based USS *Tattnall* (DDG 19) used to describe their recent port visit to Leningrad in the Soviet Union.

The first two American warships to visit the Soviet Union since World War II formed Task Group 100.1, commanded by Rear Admiral Justin E. Langille, III, Commander Cruiser-Destroyer Group 12.

Throughout the five-day Leningrad call in May, which coincided with the 30th anniversary of V-E Day, the American officers and men had unrestricted liberty in the city of 4.3 million. They were able to meet and talk with the people on the streets, go shopping and take photographs of landmarks and tourist attractions.

The U. S. Navymen were intrigued by the architecture of Leningrad, the "Venice of the North." The city was created in the 18th century by Czar Peter the Great who used Italian architects to construct it on some 40 islands of the Neva River and its tributaries.

Each day of the visit, the Soviet navy provided a number of tours, including visits to the world-famous Hermitage Art Museum, a collective farm, civilian and naval schools, and Petrodvoretz—the baroque, former summer palace of the Romanovs.

Transportation by city buses and trams was extended free to the American Navymen, as it is to all Soviet military personnel. The uniform was the ticket.

Special evening entertainment for the crews included ballet, opera, circus and popular music performances in Leningrad halls and auditoriums. Many were also able to see an ice hockey game between Leningrad and Moscow, where each ship received a souvenir hockey stick in an after-game presentation.

For most Soviets and Americans, meeting each other was the highlight of the five days. Tens of thousands of Leningraders lined the pier each day to talk with the American sailors; during two afternoons of visiting, a total of more than 13,000 boarded the ships.

The Soviets are lapel-pin collectors and display them profusely on their coats and jackets. This turned out to be the greatest medium of communication between them and the Americans. These highly negotiable items were traded for anything American, from chewing gum to old petty officer rating badges. Toward the end of the visit many of the American crewmembers began to look like war heroes, festooned with dozens of pins, most of which were in commemoration of the 30th anniversary of V-E Day.

The Americans also had close contact with the Soviets at officer and petty officer functions hosted by the Soviet Navy and at two afternoon volleyball and basketball games with students of Leningrad physical education schools.

Leahy and *Tatnall* provided tours on board, and a dinner reception was held aboard Leahy.

Left: CAPT Alexander Sinclair, CO of USS Leahy, prepares for Russian visit. Bottom left: USS Leahy docks at Leningrad pier. Below: Soviet honor guard for arrival of USS Leahy and Tattnall in Leningrad.

A LOOK AT THE SOVIET NAVY

Following the exchange visits of U. S. Navy ships to Leningrad and Soviet Navy ships to Boston, many American sailors expressed a desire to know more about the Soviet Navy. Here is a brief historical report, followed by a roundup account of the Soviet Navy as it looks today.

HISTORICAL RO

"Every potentate who has only ground forces has only one hand; yet whoever has a navy too, has both hands." So saying, Peter I (The Great), Czar of Russia, began to build his second hand in the early 1700s to fight Sweden. In the 275 years since, the Russian Navy has indeed become a strong second hand. Today, it's one of the biggest and best in the world. But it hasn't always been so.

Peter built his Navy, defeated the Swedes and established Russia as *the* maritime nation in the Baltics. Unfortunately, this was the last great Russian sea victory for the next two and one-half centuries. There were some victories in the 18th century against the Turkish Navy, but Russian ambitions were generally frustrated by the more powerful British and French navies.

At the beginning of the 20th century, there was little relief from these frustrations. The Russians suffered overwhelming defeats in the 1904-1905 war with Japan. A decade later in WWI, the Navy found itself overshadowed by the Army's needs and impotent against Germany. The Russian Navy ranked last among the sea services of the world's major nations.

In 1917, the Revolution erupted and the navy had a brief shining moment. Baltic Fleet sailors supported the Bolsheviks and were, according to Lenin, "the glory and pride of the revolution." They played leading roles in breaking up the elected Constituent Assembly and in the Cheka, an organization set up by Lenin to eliminate Bolshevik enemies. Following the successful revolt, Baltic Fleet sailors did a turnaround and demonstrated for free elections, press, speech and land use, and an end to absolute Bolshevik control. Riots broke out and the "counter revolution" was ruthlessly suppressed. Sailors were purged and the Navy was placed under the tight control of political commissars. The Russian Navy's brief moment of glory had ended. All that remained was one battleship, eight destroyers and some small craft. Other maritime activities, including shipbuilding, also stopped.

Post-revolution economic and political problems deterred further naval build-up. Three battleships, two cruisers and several small craft were recommissioned by 1924, but no large ships would be built until the 1930s.

In 1928, a series of national economic plans was begun which included rebuilding the Navy. In the first phase several small, defensive ships were built along with five submarines from old German plans. The second phase, begun in 1933, saw a sudden shift to large surface ships after Stalin had been convinced by some of his naval officers that he needed a large ocean-going Navy. Destroyers and cruisers were launched, and

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three old battleships extensively modernized. The third phase saw large ship construction go into full swing.

As Admiral Nikolai G. Kuznetsov, commander of the Soviet Navy at the time, wrote: "It was decided to build battleships, heavy cruisers, and other classes of surface warships; that is, a big surface navy. A large number of submarines were also built. Not excluded either was the construction of aircraft carriers; rather they were only postponed to the last year [of the economic plans, 1942, because of] the complexities of construction of warships of this class and aircraft designed especially for them."

The final economic phase abruptly ended when Hitler's army invaded Russia in June 1941. As the Soviets went into WWII, their ocean-going Navy was far from impressive. In spite of the economic plans it consisted of three pre-WWI battleships; 10 cruisers, only two of which were new; 66 destroyers, half of them old; and 218 submarines, the largest sub fleet in the world at the time. Only the subs were active against the German Navy during the war, and their performance was often poor. The rest of the fleet was used mainly for coastal defense and to support land operations. Generally, during WWII the Soviet Navy showed poor tactics, along with poor equipment and morale and demonstrated, as well, little aggressiveness. The only bright spot was the river flotillas which played an important role in many land battles.

WWII had devastating effects on Russia. A third of the country had been overrun by German armies, 20 million had been killed and millions more were crippled. Industry and the economy were in shambles.

The Navy was at an all time low. Industry was incapable of rebuilding and sailors were needed elsewhere to help get the country back in shape. Yet, Stalin declared that "the Soviet people wish to see their fleet grow still stronger and more powerful." By the late 1940s, the Soviets, with the help of German engineers from occupied territory and German technology, had shipyards back in operation.

In March 1953 Stalin died, and with him, the plans for the ocean-going Soviet Navy. Within months shipbuilding programs were cut back or canceled and new Soviet leaders, who were concerned with political problems, shifted the emphasis to building submarines and merchant ships. Only 14 of the 24 light cruisers planned by Stalin were ever completed, and none of his large cruisers or battleships was finished.

Nikita Khrushchev, a man of the land, with little understanding of the concept of seapower, ascended to power. Declaring that "cruisers and other big warships were suitable only for carrying officials on state visits, he halted work on big ships already under construction, and then began dismantling battleships, cruisers and destroyers. Aircraft strength was also reduced and thousands of sailors were released from duty. To replace these ships, and to counter the U. S. Navy build-up begun during the Korean War, Khrushchev began building a defensive Navy of nuclear-powered, missile-carrying and attack submarines, missile destroyers and other small craft.

Fortunately for the Soviet Navy, 45-year-old Sergei S. Gorshkov was appointed Admiral of the Fleet of the Soviet Union in the midst of Khrushchev's naval reformation. ADM Gorshkov had gained his reputation in WWII as commander of one of the Soviet river flotillas and won promotion to rear admiral at age 31. Many consider him to be the most brilliant man ever to serve in the Soviet Navy.

In any case, Gorshkov knew the value of big ships and he knew their place in the world of sea control. While he accelerated Khrushchev's nuclear and missile research and submarine programs, he also managed to influence the premier's thinking on shipbuilding and to drag his feet on scrapping.

Gorshkov's foresight and knowledge of the use and mission of naval forces are largely responsible for the Soviet Navy's position today. In spite of his influence and efforts, Gorshkov was unable at first to get construction of a balanced fleet going. But a number of international political events eventually helped him to achieve his goal. In 1956 when British, French and Israeli naval forces invaded the Suez area, and in 1958 when U. S. naval forces landed in Lebanon, the Soviet leaders realized they couldn't intervene because their Navy was inadequate. The lesson was reinforced in the fall of 1962 when a U. S. blockade was able to thwart Soviet plans to put missiles and bombers in Cuba. Soviet leaders opted for a stronger Navy.

Another important decision was made as a result of these incidents. In 1963 the Soviet chief ordered his Fleet to sea, and it began operating away from its traditional coastal areas. By mid-1964, five Soviet warships were permanently based in the Mediterranean Sea. During the 1967 Arab-Israeli War, the flow of Soviet ships into the Med became a steady stream and at least 50 ships are now normally on station there. The expansion into other oceans soon followed. Soviet ships began regular operations in the Indian Ocean in the late 1960s, in the Caribbean in 1969 and off the West Coast of Africa in late 1970. The Soviet Union had at last developed its large, ocean-going Navy.

SOVIET SHIPS . . . SUBMARINES

The Soviet Union has been a world leader in submarine forces since shortly before WWII. In September 1939, when war broke out, it had 185 subs, compared to Germany's 57. Within two years the Soviets had built that up to 218. They have continued to stress submarine development and today have over 300 subs in the active fleet. More than one-third of these are nuclear powered, and over 40 per cent of the total submarine fleet carries missiles. Some of the more important classes of Soviet submarines are:

- *Foxtrot class.* A 300-foot-long, diesel-powered attack (SS) submarine armed with 10 torpedo tubes. This class was introduced into the fleet in the late 1950s, and some 55 are still in active service.
- *Golf class.* A 320-foot-long, diesel-powered ballistic missile (SSB) submarine armed with three *Serb* missiles with a range of about 650 miles, plus torpedoes. This class was originally built to carry a missile with a 350-mile range, but most were later modified for the longer range ones. The modified *Golf* subs can fire their missiles while submerged. Ballistic missiles are pre-targetted for use against land targets. Twenty-two of this class were built between 1958 and 1962.
- *Hotel class.* A 380-foot-long, nuclear-powered ballistic missile (SSBN) submarine armed with three *Serb* missiles, plus torpedo tubes. Nine of these boats were built between 1958 and 1962.
- *November class.* A 360-foot-long, nuclear-powered attack (SSN) submarine armed with eight torpedo tubes. The Soviets' first nuclear-powered sub, she was probably underway in 1959, but the official announcement was not made until October 1960. Fourteen of these subs were built between 1958 and 1963.
- *Echo class.* A 380-foot-long, nuclear-powered antiship cruise missile (SSGN) submarine armed with six 400-mile-range *Shaddock* missile tubes (the range capability may vary), plus torpedo tubes. Five of these subs were built from 1960 to 1962. In 1963, a larger *Echo-II* class was launched which has eight missile tubes. By 1967, 27 *Echo-IIs* were built. Their greatest drawback is that they must surface to fire their missiles.
- *Juliett class.* A 280-foot, diesel-powered cruise missile (SSG) submarine armed with four *Shaddock* missile tubes, plus torpedoes. About 16 of these were built during the early 1960s.
- *Victor class.* A 285-foot-long, nuclear-powered attack (SSN) submarine armed with torpedoes. Developed as a follow-on to the *November* class, *Victor* is capable of speeds over 30 knots submerged.
- *Yankee class.* A 425-foot-long, nuclear-powered ballistic missile (SSBN) submarine armed with 16 missiles which have a range of 1300 miles, plus torpedoes. This "Polaris" type sub had her initial sea trials in 1968 and 34 have been built.
- *Charlie class.* A 295-foot-long, nuclear-powered cruise missile (SSGN) submarine armed with eight underwater-launched missiles having a range of about 30 miles, plus torpedoes. This antiship sub first went to sea in 1968 and about 10 of them have been built.

Above: A Soviet "F" class submarine underway in the Mediterranean. Right: A Soviet Delta-class, nuclear-powered submarine underway in international waters.

- *Delta class.* A 450-foot-long, nuclear-powered ballistic missile (SSBN) submarine armed with 12 ballistic missiles with a range of 4200 nautical miles, currently the longest range missile in existence, plus torpedoes. Built as a follow-up to the *Yankee* class, the first *Delta* was completed during 1973 and is the largest submarine yet built by any Navy. About 10 of them are now in operation. An improved *Delta* class sub with a larger missile battery is believed to be under construction.

The Soviets now have about 44 *Yankee* and *Delta* class submarines carrying almost 700 missiles. Under current SALT agreements they are permitted a maximum of 62 modern ballistic missile submarines with 950 missiles.

OTHER CLASS SHIPS

Once Soviet leaders were committed to building a surface Navy in the mid-1950s, they went at it with a will. Whether they've achieved their goal of making it the biggest and best is hotly debated among Navy watchers, but they do agree the Soviets have made remarkable achievements. Their success didn't come overnight. They first had to decide what kinds of ships they wanted, plans then had to be drawn, shipyards and related industries had to be retooled for the work and, finally, actual construction had to be done. It wasn't until late 1962 that the first ships of the new Soviet Navy went to sea.

The first were *Kynda*-class "rocket cruisers" designed specifically to counter U. S. aircraft carriers. Their main armament is eight *Shaddock* missile tubes, and they also have a twin antiaircraft missile launcher, six torpedo tubes, antisubmarine rocket launchers and four 76mm guns. All these weapons are crammed into a 465-foot hull, smaller than many western destroyers with less armament. *Kyndas* are capable of 35-knot speeds.

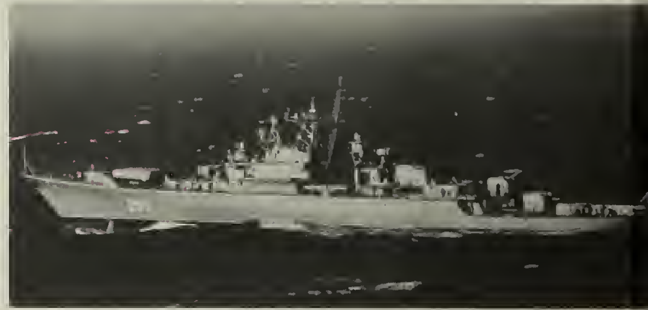
By the early 1960s, after four *Kynda* cruisers were built, a slightly larger *Kresta-I* class began building. In this ship, the *Shaddock* tubes were reduced from eight to four, but a second antiaircraft missile launcher and an ASW helicopter were added. A larger *Kresta-II* soon followed. *Shaddock* was replaced by 25-mile-range, antiship missiles. The shift to these much shorter range missiles was apparently in line with a change in the Soviet Navy's mission from purely anticarrier to general use and sea control. *Kresta-II* also carries advanced antiaircraft missiles and electronics equipment. Six of these 520-foot-long ships were built since 1970.

In 1973, another new missile cruiser was launched, the 560-foot-long *Kara*-class, which was bigger still than any modern missile-equipped cruiser yet built by the Soviets. Improvements in weapons were made, and with the larger size, operating range was increased—a reflection of the Soviet global Navy strategy.

In addition to these new classes, several older *Sverdlov*-class cruisers which were built in the late 1950s have been kept on the active list. Most of them have retained their all-gun armament, but one has a twin long-range antiaircraft missile launcher in place of a 6-inch gun turret. Two of these cruisers have been altered to act as command ships, complete with satellite communication devices. These two give the Soviets the capability for improved command and control in remote areas such as the Indian Ocean and South Atlantic.

There are currently about 30 cruisers in the active Soviet fleet.

Along with cruisers, the Soviets began building some new destroyers and frigates. One new class which entered the fleet in 1970 has been called "ton for ton, the heaviest armed and most effective destroyer afloat." This 405-foot-long *Krivak*-class destroyer is, like most of the new Soviet ships, bristling with arms.



Opposite page top to bottom: A Kynda-class Soviet cruiser; Kresta-class guided missile armed destroyer leader off the coast of Hawaii; Sverdlov-class cruiser at anchor; guided missile armed destroyer of the Krivak-class; and a Soviet Kashin-class destroyer. This page: A Russian-built Egyptian OSA class missile boat underway; Nanuchka-class missile boat; a Soviet amphibious ship of the Alligator-type; Soviet antisubmarine helicopter carrier Leningrad in the Indian Ocean.

It is the world's smallest warship having both antiship and antiaircraft missiles—four tubes for the former, two twin launchers for the latter. *Krivak* also has antisubmarine weapons, eight torpedo tubes, four 76mm guns and mine rails. Her advanced electronics systems include hull-mounted and variable-depth sonars.

Since 1963, the Soviets have also built about 20 *Kashin*-class frigates. These 470-foot-long "antisubmarine ships" are armed with two large antiaircraft missile launchers, antisubmarine rocket launchers, five torpedo tubes, four 76mm multipurpose guns and minelaying gear. A few have been fitted with short-range, surface-to-surface missiles and all have a heavy allowance of electronics gear. *Kashin* frigates are most notable for being the world's first large gas-turbine-powered warships. These efficient engines can push them to speeds above 35 knots. The success of gas turbines in *Kashin* frigates prompted the Soviets to put them in *Kara*-class cruisers, making them the world's largest gas-turbine-powered ships.

Although they have some new classes, the majority of the Soviet destroyer fleet is made up of older ships from the 1950s and 1960s. Many, however, are now armed with antiship and antiaircraft missiles, along with their conventional guns. During the past few years a modernization program for these ships has been underway and more advanced weapons are being added.

There are now about 80 frigates and destroyers in the Soviet fleet.

The *Mirka* and *Petya* classes of escort ships first appeared in 1963. They displace over 1000 tons. Over 100 of these and older escort ships are now in operation along the Russian coast and in the open seas.

The Soviets also have a vast array of small combat craft, more, in fact, than the rest of the world's navies combined.

Perhaps the best known of the Soviets' small craft is the 130-foot-long *Osa*-class missile boat. Each carries four missile launchers for the 25-mile *Styx* missile. They also have two rapid-fire twin 30mm guns. Their top speed is over 32 knots.

The small size and limited capabilities of the *Osa* boats led to the introduction of the larger *Nanuchka*-class missile ship in 1970. The 200-foot-long ship has an antiaircraft missile launcher forward and a twin 57mm gun mount aft. Her main battery is six 150-mile-range antiship missile tubes. *Nanuchka* is one of the heaviest armed warships of this size in any Navy. About 135 guided missile patrol boats are in service.

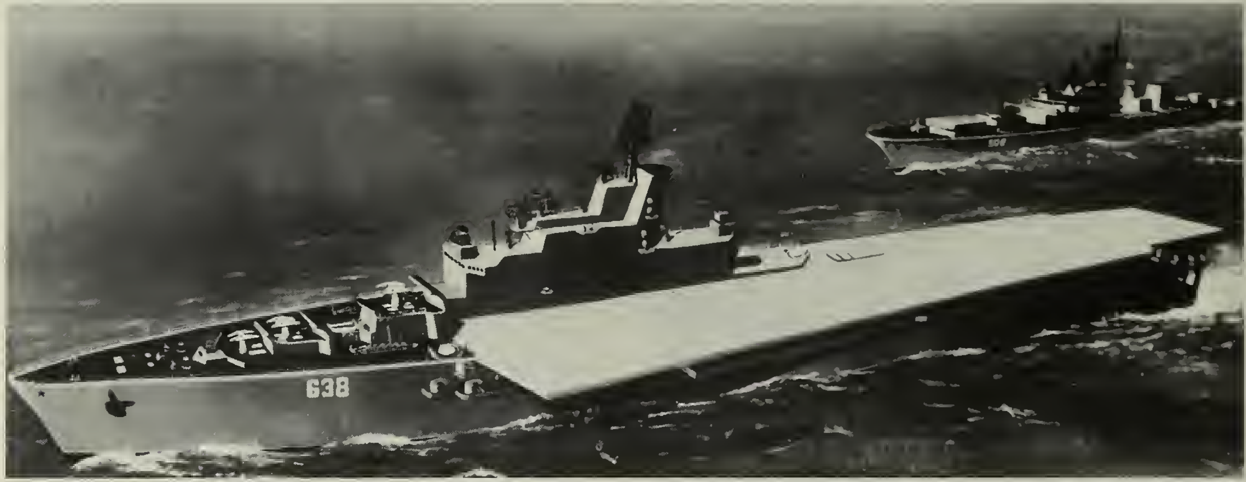
In addition to these two classes of missile boats, the Soviets have about 450 ASW, torpedo and patrol craft, and about 270 minesweepers in service.

Amphibious forces and ships have received added emphasis by the Soviets in recent years. There are currently about 10,000 naval infantry, as their Marines are called, whose job includes not only amphibious landings, but also "prolonged river crossings" and naval base defense.

To transport naval infantry, there are about twelve 375-foot-long *Alligator*-class tank landing ships (LSTs), more than sixty 245-foot-long *Polnocny*-class medium landing ships (LSMs) and about 25 other miscellaneous landing ships of 200 feet or more in length. The larger ships are armed with rocket launchers and antiaircraft guns. Soviet amphibious capabilities are expected to increase in the coming years.

In 1967, the Soviets completed their first aviation ship, *Moskva*, a radically designed half-cruiser, half-helicopter carrier. The second of these 625-foot-long antisubmarine cruisers, *Leningrad*, was underway the following year. Each carries about 20 ASW helicopters, and the entire aft half of the ship is a flight deck. In the forward cruiser half, they are armed with two twin antiaircraft missile launchers, antisubmarine rocket launchers, 10 torpedo tubes and four 57mm antiaircraft guns. They also have advanced radar, hull-mounted and variable-depth sonar and electronic countermeasure equipment. In addition to their ASW role, these ships can also be used as task force and fleet flagships.

A second generation aircraft carrier is now being completed by the Soviets. Also a variation, the 900-foot-long *Kiev* is a cruiser forward, but has an island superstructure to starboard and an angled flight deck aft. The 600-foot-long flight deck does not have catapults or arresting gear, and the ship will probably carry about 20 helicopters and about a dozen V/STOL aircraft. A second ship of this class is now under construction.



Above: Artist's concept of the new Soviet aircraft carrier now under construction and expected to be more than 900 feet long and displace some 45,000 tons. Also shown is a Krivak-class guided missile destroyer. Below: The Soviet intelligence trawler Gidrofon underway in the Gulf of Tonkin with the attack aircraft carrier USS Coral Sea (CVA 43) and her escort ships in the background.

Closely allied with the buildup of warships has been the increase of surveillance and intelligence ships.

Probably the most famous of their intelligence collectors are the unarmed trawler-type AGIs. They are manned by Navy crews and fly the Russian naval ensign. Some 50 AGIs are presently in service and keep a close watch on important U. S. Navy bases such as Rota, Spain; Holy Loch, Scotland; Apra Harbor, Guam; and Charleston, S. C. They have watched hundreds of U. S. military and civilian missile launches, and one was on hand when the first *Polaris* submarine, USS *George Washington*, tested her missile launching system in April 1960; another was nearby when USS *James Madison* first fired the multiwarhead *Poseidon* missile in August 1970.

AGIs regularly shadow and monitor Allied fleets in the Mediterranean and South Pacific, and often sail into the center of operating formations. Their boldness, aggressiveness and efficiency are legendary among U. S. and Allied sailors. At the conclusion of one exercise, for example, a British admiral signaled, with tongue-in-cheek, from his carrier to ask a trailing AGI if she needed to be refueled. The trawler replied, "Not if you maintain your original schedule." The original schedule was classified.

Besides these AGIs which openly collect intelligence, no one knows for sure how many of the Soviets' large research and fishing fleet are also engaged in that work.

SOVIET NAVAL AIRCRAFT

Soviet naval aviation has about 1200 planes, most of which are based ashore, except for helicopters and V/STOLs. Aircraft are organized into squadrons whose commanders report to each of the four combat fleet commanders. Soviet naval aviation has four basic missions:

- *Reconnaissance.* This mission is achieved with about 50 large, four-engine, turbo-prop *Bear-D* planes, about 50 twin-jet *Badger* aircraft (roughly equivalent to U. S. B-47s) and a few supersonic *Blinder* jets. Besides long-range reconnaissance and ocean surveillance, some of these planes are equipped to provide mid-course guidance for antiship missiles launched from surface ships, submarines and other aircraft.
- *Antiship strike.* Some 290 *Badgers* are assigned this task. These planes are fitted with antiship missiles whose ranges vary from 55 to over 300 miles. A new variable sweep-wing supersonic jet is now being put into service for this mission, and is expected eventually to replace the *Badger*. In addition, some bombers of Soviet Long-Range Aviation (counterpart of the U. S. Strategic Air Command) are fitted to attack ships. All these strike aircraft have in-flight refueling capability.
- *Antisubmarine.* A large force of some 400 fixed-wing aircraft and helicopters are assigned this mission, including about 50 *May*-class turbo-prop planes (similar to our P-3 *Orion*) and about 100 *Mail*-class twin-engine flying boats. Antisub missions are flown mostly from shore bases and concentrate on coastal defense; however, helicopters from the *Moskva*-class cruisers and the *Kiev* carriers will certainly get into this work. Soviet ASW planes carry a variety of detection equipment and antisubmarine bombs and torpedoes.
- *Support Aircraft.* About 350 tanker, transport and utility planes are assigned to the Soviet Navy. About 50 of this number are assigned to training missions. This number may seem small until you consider that the Soviet Air Force handles all basic and advanced flight training and most of the airborne logistic support for the Navy.

The construction of aircraft carriers and the promotion of the naval air commander to Marshal of Aviation, the equivalent of fleet admiral, indicate that more importance is being placed on naval aviation.

Right: A Soviet TU-95 Bear-D bomber. Below: Two U. S. Navy F-4 Phantom II fighter aircraft and a Soviet TU-16 Badger bomber in flight in the vicinity of the attack aircraft carrier USS Kitty Hawk (CVA 63).

OTHER SOVIET FLEET

When the Soviets set out to build up their Navy, they didn't forget the other aspects of seapower. The growth of their merchant marine, fishing industry, ocean research activities and shipbuilding has been just as great as that of their Navy.

Soviet merchant ships, while belonging to one of the world's largest merchant fleets, are generally smaller than those of Western nations, and this allows them to trade in small, under-developed ports not served by larger merchant ships. Soviet yards are beginning to produce larger ships, however, and are also developing containerized cargo systems.

The importance of the Soviet merchant marine centers around two missions in addition to trade. First, as a political asset in carrying out trade with and bringing supplies to third world nations. Similarly, it supplies its allies in times of crisis or war, as it did during the Vietnam War when it carried material from Black Sea ports to Hanoi, more than 14,000 nautical miles away. Second, in providing logistic support of the Navy. Soviet merchant ships regularly refuel and resupply Navy ships at sea. Another less obvious task of the Soviet merchant marine is intelligence gathering in foreign ports. It is believed that many officers and crewmen of large Soviet merchant ships are Naval Reservists.

Today, the Soviet merchant marine ranks fifth in the world in the number of ships, and about ninth in cargo-carrying capacity. In addition to cargo ships, they also operate about 50 passenger liners, many of which are on regularly scheduled runs. Soviet leaders have announced that they will have the world's largest and most modern merchant marine fleet, and they seem to be well on their way towards that goal.

In fishing, they rank third with an annual catch exceeding seven million tons, and their fishing fleet of more than 4000 ocean-going vessels is already the largest of any nation. These fleets sometimes have as many as 1000 ships working together at one time. They include trawlers, factory ships, specialized repair ships, tankers, water vessels and tugs. Factory ships can clean, fillet, can the catch and transfer it ready for market to refrigerated cargo ships at sea.

Fishing ships often aid naval ships. In 1972, for example, a ballistic missile submarine with engineering problems was supported for several days by a fishing repair ship.

Soviet fishermen are among the highest paid workers in the country, and they receive many extra benefits for their arduous job. This industry is also a major source of Naval Reserve personnel.

Soviet ocean and space research ships are undisputed leaders with a fleet of more than 150 craft specifically configured for this work. These ships range in size from small coastal craft to the 366-foot-long *Michail Lomonosov* which can accommodate up to 40 scientists and has 16 laboratories on board, to the 775-foot-long *Cosmonaut Yuri Gagarin* which is fitted with elaborate atmospheric research and space flight support equipment. In the late 1950s the Soviets even converted two submarines to work in fishery and oceanographic research.

All these special ships are controlled by individual research institutes and various nonmilitary ministries, but some of them obviously have close ties with the Navy and intelligence activities. Once again, many officers and crewmen of these ships are Naval Reservists.

To build all these types and numbers of ships since WWII has called for a fantastic network of shipyards. Today the Soviet Union has 18 large shipyards each employing at least 2000 full-time workers. In all, it is

Left: A Russian "fish base ship" with smaller vessels alongside. The base ship can reportedly stay at sea for 60 days. Right: The Soviet oceanographic research ship Gavril Saritshev underway.

estimated that more than 265,000 people work in the industry.

Every aspect of shipbuilding in the Soviet Union is controlled by the Ministry of Shipbuilding, and all technology and every resource is shared throughout the industry. All equipment is standardized and the Ministry must approve every piece of it from a simple hand tool to the most complex computer-controlled machine before it can be used by any yard. Naval and merchant shipbuilders freely exchange construction methods.

The whole Soviet maritime scene fits together like a giant puzzle. Shipbuilding, upkeep and design are controlled by one single ministry. Ships of each maritime organization actively support one another.

SOVIET NAVY MISSIONS

The Soviet Navy's mission has changed from coastal defenses following WWII, to deterring U. S. aircraft carriers and their nuclear attack capabilities in the mid-1950s, to a more offense-oriented one today. This includes four tasks: (1) Nuclear strike and deterrence, (2) Sea control and denial, (3) Presence, and (4) Seaborne projection. Current trends indicate that this will remain the Soviet mission in the future.

The buildup of the large attack submarine fleet following WWII was intended to deter Allied use of shipping lanes, particularly in the Atlantic, during wartime. Later anticarrier and anti-Polaris forces expanded the sea denial mission. In the late 1960s, sea control also became important. This shift brought the buildup of modern, missile-carrying surface ships with increased capabilities. The sea control mission has also caused the Soviets to expand their operating areas from just the Baltic and North Atlantic to areas farther away from the Soviet landmass, for example, the Med.

Presence has been a natural by-product of the expansion, but it is also a conscious, well-planned mission to spread the political goals of the Communist Party through use of the Navy. In the past few years, Soviet warships have visited more ports in more nations than ever before. Naval presence increases in importance as more nations become more dependent on the sea for their resources, trade, political interests and military security.

The final mission, projection, is the use of the military to project a nation's power into remote sea and land areas. Traditionally, the Soviet Union has relied on its Army for projection into land areas adjacent to the USSR, and the merchant marine for projection overseas—Cuba in 1962, for example. The Soviet Navy has now assumed an overseas projection role. Expanded operations in all oceans, the buildup of naval infantry, ocean-going amphibious ships, the *Kiev*-class carrier and a large, technologically advanced fleet indicate this.

All aspects of this mission are closely related. Each calls for a large, modern, well-balanced fleet. Proof that the Soviets have this and can now carry out their mission was dramatically demonstrated by the recent worldwide "Okean" exercises, the largest peacetime naval exercise in history. Soviet Navy and merchant ships simultaneously conducted maneuvers in the Atlantic, Mediterranean, Pacific and Indian Oceans. These included antisubmarine, antiaircraft carrier and amphibious landing operations. Land-based naval aircraft, the Soviet Air Defense Force and Long-Range Air Force also participated with simulated attacks against enemy ships. The whole exercise was apparently coordinated from Soviet Naval Headquarters in Moscow.

SOVIET SAILORS

As with every Navy, the most important asset the Soviets have is their sailors. Currently, about 475,000 officers and enlisted men are on active duty. The Soviet Union has compulsory military service and men are drafted into the Navy as well as the other services. Women are not drafted, but probably fill clerical and support positions; they are not considered a part of the armed forces.

The young Soviet's military career begins at about age 15, during his last two years of compulsory education in public school when he gets training in military regulations, topography, gunnery, antitank grenade-throwing and marching drill.

Young Soviets also receive military training through the Komsomol (Young Communist League) or the Volunteer Society for Cooperation with the Army, Aviation and Fleet (the DOSAAF). For those entering the Navy, this includes training in seamanship, communications and naval discipline. These organizations have close ties with the military, and nearby bases send active duty sailors to give lectures and conduct semitechnical classes. Sports, including small arms competition, and political lessons are also included.

By the time a young man begins his three-year obligated service he has been thoroughly prepared to fit into the system. First assignments are ashore for further training with advanced equipment and shipboard simulators. Once at sea, he continues his professional training and liberal doses of political indoctrination.

During their first enlistment, Soviet enlisted men have few privileges, little leave and somewhat severe discipline when necessary. In return for his service, the Soviet sailor becomes a member of the most popular branch of the armed forces, receives great respect from the civilian community and has a chance to see many different and interesting parts of the world. Morale is high and the retention rate seems to be about the same as in the U. S. Navy.

When his initial enlistment expires, the enlisted man is offered a new military status if he ships over. Benefits increase considerably and privileges compare favorably with what he could expect in civilian life.

Few enlisted men in the Soviet Navy become officers. This is a privilege usually reserved for sons, grandsons or nephews of party officials or naval officers.

Those chosen for the officer corps often begin their naval training at age seven by entering the Nakhimov school system. Originally established to educate sons of deceased naval officers, these schools have become the naval officer prep schools. Boys there get academic, political and military training.

Upon graduation, and successful completion of the entrance exam—usually by age 17—the officer candidate enters one of 11 Soviet higher naval schools, the equivalent to the U. S. Naval Academy. They appear

Left: Soviet sailors ride a liberty boat from their Kashin-class guided missile armed destroyer. Above: A Soviet Navy officer. Right: Crew members of the Soviet Kanin-class guided missile destroyer Boyky.

to offer both undergraduate and graduate education, as well as intensive political indoctrination. Virtually all Soviet naval officers are naval school graduates. Students are trained as line officers or in a specialty such as engineering or electronics. The undergraduate course is four years long, or six for engineering officers. The few non-Nakhimov graduates who are selected for the higher naval school must attend a preliminary six to eight weeks of basic training.

Upon graduation the student is commissioned and receives orders to a ship or aviation unit. During this first tour of duty he will attend special training courses and technical schools. Later, he will be rotated for seven-year tours between sea and shore duty and will probably attend graduate and joint service schools and the Naval Academy, the Soviet equivalent of our Naval War College. Soviet officers can earn advanced degrees up to the Ph.D. in naval sciences.

Soviet naval officers are highly intelligent and well educated. Enlisted men are disciplined and well trained. All Soviet navymen are dedicated, highly motivated and extremely proud of their service.

SOVIET NAVAL LIMITATIONS

For all its assets, the Soviet Navy is not without limitations. A sufficient number of all-weather ports is a problem, but this has been partially overcome by using icebreakers and covered building and repair ways in northern ports.

A lack of air cover for ships operating far from home is another problem. The Soviets are trying to solve it with surface-to-air missile systems, shore-based air power operating from overseas bases, and—now—sea-based aircraft operating from the new *Kiev*-class aircraft carriers.

Open ocean replenishment has also been something of a problem, but the large, modern merchant fleet and new underway replenishment ships are solving this.

Old problems of getting through controlled straits, such as the Danish Straits into the Baltic and the Turkish Straits from the Black Sea into the Mediterranean, have largely been overcome by ship deployments far from home and overseas bases.

Some have criticized the Soviet Navy as being a "one shot" Navy—a strong initial strike power with relatively little left after that. This "limitation" however, is not something that just happened, it has apparently been carefully developed for the future in what the Soviets believe would be short-duration conflicts of days or even hours.

A summation of a report from Secretary of Defense James R. Schlesinger had this to say last year, "As we look ahead we see a Soviet Navy that is becoming increasingly capable of overseas deployment, whose submarines could pose a significant threat to free world shipping, and whose surface combatants, with their considerable antiship cruise missile capability, could inflict serious damage on our naval forces in a surprise attack."

Czar Peter would certainly be impressed with his other hand if he could see it today.

—JO1 Tom Jansing

A U.S. SAILOR in the SOVIET

Grab the brass ring! This could well describe Chief Journalist William G. Clark's response when he was included in a group invitation to visit Russia this past year—the group being members of the Washington, D. C.-based Arena Stage. Clark is a full-time journalist attached to the Office of the Chief of Information; by avocation he's a part-time member of Arena Stage and, also, a part-time artist, adept with both brush and pen. He took an extended leave, gaining Navy approval to visit a restricted country. Following a briefing by the State Department, he and the actors of Arena Stage were off on a whirlwind tour (18 days were spent in travel) which included performances of two American classics in Moscow and Leningrad.

His reaction to his Russian visit is illustrated in words and pictures on these pages. Here it is—an American sailor in Soviet Russia.

"What's it like, what's Russia really like?"

Without fail, this is the most frequent question asked of me since visiting Moscow and Leningrad as a member of the Arena Stage touring company.

After long negotiations, two American classics, "Inherit the Wind" and Thornton Wilder's "Our Town," were accepted to represent the U. S. as part of a cultural exchange program between the two countries.

From repertory companies across the country, Arena Stage of Washington, D. C., was picked, and I was included for several understudy assignments in "Inherit the Wind."

In both Leningrad and Moscow, Arena played to sellout crowds who lavished sustained standing ovations upon the performances and, not infrequently, delivered flowers and gifts at curtain calls. Simultaneous translations of the productions by an interpreter detracted somewhat from the plays' luster; nevertheless, both productions must be labeled overwhelming successes.

Russia was like no other country I've ever visited. I had envisioned a country done up in austere black, white and varying hues of gray. These thoughts were dispelled the moment our 68-member company, two tons of scenery and one live stage monkey arrived at the Sheremetyevo airport in Moscow. ("Inherit the Wind" concerns the 1925 Scopes "Monkey Trial.") New sights and sounds constantly assaulted my senses. Myths were shattered as I was greeted by freeways, traffic lights, neon signs, television towers and numerous modern buildings.

And Leningrad, "Venice of the North," is like no other city I've seen, unique in character.

Inconsistency is the noun one uses to label the vast difference presented by Moscow's onion-domed, Byzantine St. Basil's in Red Square, only two blocks from the pinnacle of 20th century Russian architecture, the modern, 2000-room glass and steel hotel "Rossiya" (Russia).

Rossiya's rooms were small, yet modern—and overcrowded. I was one of the more fortunate who drew a room with an excellent view of the southern part of the city from across the "Moskva" (Moscow) river. Standing on the tiny balcony, I saw the Kremlin, visible to the west, and to the east was one of five of the tallest skyscrapers in Moscow, an apartment building built in Lenin's time.

Noteworthy in Rossiya was the multitude of "desk clerks." Every floor had several at various points and their primary function was that of any such clerk—pick-up point and repository for room keys, arranging for laundry service and the like. Their second function

seemed to be maintaining social decorum and ensuring that the local citizenry stayed out of the hotel.

The Russian people I met on the tour were courteous, friendly, even concerned, not unlike many of our own people. Their desires and ambitions appeared little different from anyone else's—the right to live comfortably, do meaningful work, and provide for home and family. When one considers that once a person is assigned a job or profession in Russia his right to change does not belong to him, whether it be waiter or warden, then the challenge presented by such goals and desires can be more easily understood. Tovstonogov, director of the Gorki Theater and one of the USSR's great artists, said, "Human nature is like the ocean, unchanging, today's calm, tomorrow's tempest—but it's all the same ocean. Man is as he is, as he was, as he always will be."

Our time in Moscow and Leningrad was spent rehearsing, performing and trying to see everything. One of the Arena company reflected our mood when he wearily swung into a chair at the dining room table one evening, "When I die, I plan to spend the first 1000 years sitting down."

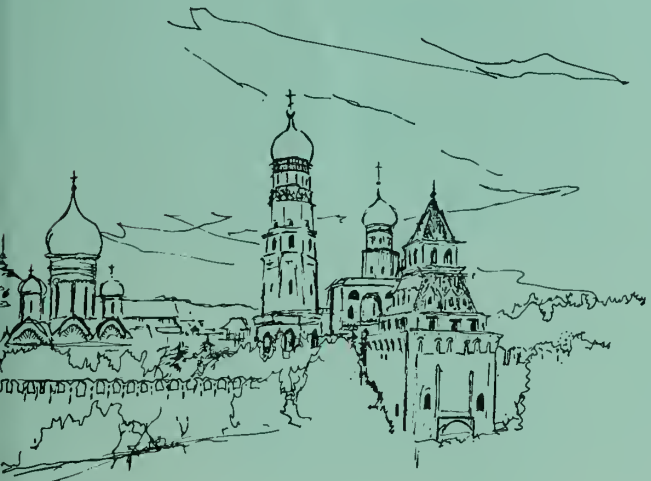
Most of the company was involved in both productions. I was one of the lucky ones who performed in only the one show, allowing me to take advantage of most of the tours and events arranged for us by the Ministry of Culture. During our two-week tour, I managed to attend the opera, "Carmen," at the Bolshoi theater; the play, "Bolsheviks;" the Moscow and Leningrad circuses; the Leningrad Symphony; and tours of the Kremlin, Lenin's tomb, the Hermitage and Catherine's summer place. It became apparent to me that the Soviets had made a concentrated effort to arrange a successful cultural exposé of the country.

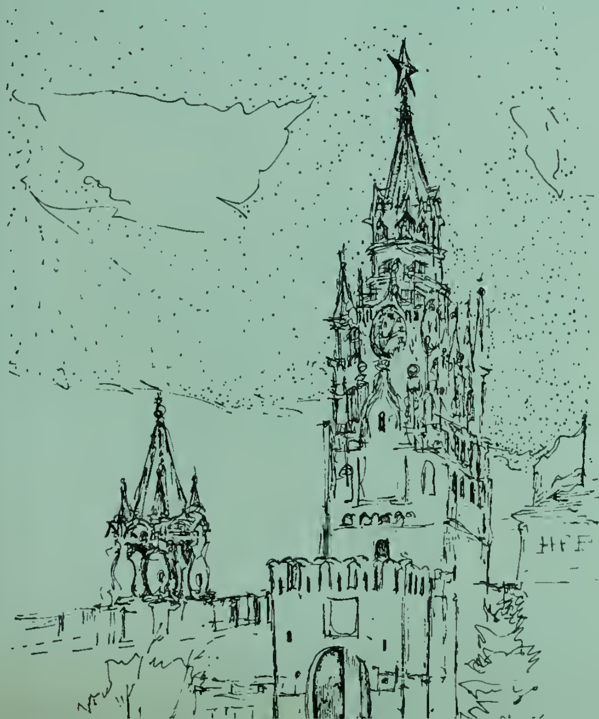
In the free moments I could grab in any fashion, I ventured into the streets, sketchbook in hand.

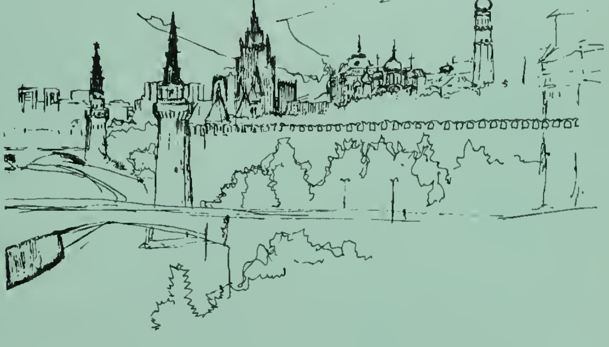
With wide variations in all categories, it was no surprise to discover that Russian food is a kaleidoscope of eating habits of many nationalities. Russian meals provided at the hotels were tasty and nourishing, with the exception that the servings were slightly smaller than are received at home.

In Moscow one night, five of us ventured to a large restaurant to sample local fare—the main course was chicken, served with chopped nuts and blueberrries. Total cost for appetizers, five meals, two bottles of wine and a bottle of vodka was $34 (U. S.). Fortunately, tipping is one of the few western customs that has yet to arrive in the Soviet Union.

One afternoon I decided to brave the congested grocery store and purchase a can of coffee, just to experience it from a native's point of view. I managed to station myself at the front of the line at the store's door which was just opening after the 1-3 p.m. break. The door opened, I raced in, and sang out, "Kofe." The clerk signaled, "What kind?" I pointed to the red-labeled container. The clerk wrote out a ticket that I







Opposite page top: Awaiting departure from Dulles International. Bottom: "Song of Stone," St. Basil's, Moscow. Left above: Ivan the Terrible's Bell Tower behind the Kremlin Wall. Left below: Clock Tower. Below: Southeast corner of the Kremlin. Sketches by the author, JOC William G. Clark.

took to the cashier and paid. From the cashier, who used an abacus, I received a second ticket, this in longhand, which I took and continued battling my way through the throng of pushing and shoving shoppers. I finally reached the counter and picked up my "kofe." It is inconceivable to imagine a mother with a small child or two undertaking the family marketing under these awesome conditions. Then there is the fact that fish must be obtained from the fish market, meat at the butcher, fruit at the fruit store, and so on.

Although my pound of coffee was considered a bargain at 60 cents (U. S.), Russia is not a shopper's paradise. Prices are high, even by our standards, and the overall quality is inferior. Since all stores are government-owned and all prices are state controlled, there are no bargains. The redeeming feature is that while one cannot locate a sale, neither are there any dangers of tourist traps.

Crowds were everywhere. Crowded conditions are not just confined to "necessity" stores—you found them in the streets, stores and cinema alike. With all the people on the streets, I frequently found myself wondering, "Who is doing the work?"

In Leningrad, the Russians tell a joke on themselves regarding their crowded main street, Nevsky Prospect. "What do the people do when they aren't walking up Nevsky Prospect?" The reply: "They are walking down Nevsky Prospect!"

On one venture in Moscow I decided to attend a Russian movie. Upon arrival at the lobby, I thought I would only have about 15 minutes or so to kill after getting my ticket. After 20 minutes of limited progress in the mass of humanity, a bell rang and a large portion of the crowd dispersed. With numerous jabs at watches pointed to the schedule over the ticket window, the Russians finally conveyed the message that the next feature had just been sold out and I could obtain a ticket for the later performance. I decided to give it up, however.

By far the one item that made the greatest impression upon me was the efficient commuter systems from all types of mass transit—buses and trolleys, both electric and diesel—to the subway. The subway exceeded my wildest imagination. For only three kopecks, about five cents, I was allowed to travel to any point within the city and I was greeted with an immaculate interior of white and brown marble, occasional plaques and paintings, and the icing, the presence of chandeliers.

The lack of violent crime was evidenced by the large numbers of people found walking the streets of the cities at all hours of the night. When one considers the severe consequences that await the convicted purse snatcher or mugger, the reason is obvious.

Try this on for size the next time you decide to move to a new house or apartment—in Russia, everyone is allocated a specific amount of living space and living quarters are assigned accordingly. Granted, everyone is guaranteed a place to live and emergency situations can be taken care of within a few days, but under ordinary conditions, it takes about two years to get an apartment. One cannot expect to move to larger quarters simply because he can afford it. That's impossible. An engineer, who spoke English, and I met between matinee and evening performances one day, and he and I went walking and talking to kill the time. He disclosed that he and his wife worked and together they earned the equivalent of about $400 U. S. per month. They didn't pay taxes, medical and dental care is free, and apartments are inexpensive at only about

Top: Guests in Rossiya Hotel, Moscow. Right: Behind the stage, Pushkin theater, Leningrad. Opposite page: CDR William Manthorpe, Jr., talks with a Soviet sailor during a recent visit to Leningrad by the guided missile cruiser USS Leahy (CG 16).

$8-10 a month. Still, even with $400 a month, there wasn't enough to take care of all the necessities and provide for any luxuries.

Pravda and Tass provide the news, such as there is, but for most citizens, the Voice of America and Radio Free Europe tell what is going on in the world. Not once did I receive a negative reply when I asked if they listened to either broadcast.

Another insight came in a more subtle way. Russians love buttons! Any and all types of lapel and cap pins are sold at vending stands for about 10 to 25 cents. They are very political in nature, but here and there I noticed, on the "under 30" group, comic buttons that were very subtle "establishment" put-downs.

Probably the most encouraging note of the trip rang from the welcoming speech at the Sovremennik ("Contemporary") theater before a party given in honor of the Arena Stage group.

The speaker said, in effect, that our governments may be concerned with such matters as grain and petroleum, but actors had a responsibility as artists in "showing" governments the way. Later the entire group of some 150 Russian and American actors joined hands in a large circle and sang "We Shall Overcome" and "Hava Nageela." Lots of schmaltz but it was encouaging schmaltz.

I couldn't help but remember, then, the line from the title source of one of our plays: "For he that troubleth his own house shall inherit the wind," (Proverbs 11:29).

—JOC William G. Clark.

SECOND TIME AROUND

It is often said that life's experiences take on special meaning the second time around. For Commander William H. J. Manthorpe, Jr., his visit to Leningrad in May was no exception.

"I spent three years in the Soviet Union (1971-74) as Assistant Naval Attaché in Moscow. During that time I made more than 50 trips to Leningrad," said CDR Manthorpe. "There are few cities I know better. Returning was like seeing an old friend."

CDR Manthorpe was participating in the five-day visit by two U. S. Navy warships to Leningrad in commemoration of the end of World War II in Europe.

Because of his previous experience in the Soviet Union and his ability to speak the language, Manthorpe, who is assigned to the Office of the Secretary of Defense, accompanied USS *Leahy* (CG 16) to serve as interpreter and aid in coordinating activities during the visit.

He conducted a series of orientation lectures for the ship's crew on the Soviet Union and the city of Leningrad.

Of his three-year assignment in Moscow, CDR Manthorpe said, "I found the duty challenging and interesting, personally as well as professionally. I was the representative of the U. S. Navy to the Soviet Union."

He stated that for most of the three years the opportunity to bring about the exchange of ideas between the American and Soviet navies was quite limited.

"However," he said, "I was able to participate in arranging exchanges between the American and Soviet Incidents-at-Sea delegations."

During his tour, his wife, Judith, and their younger daughter, Jennifer, lived in Moscow's diplomatic community. Jennifer attended the Anglo-American School and Kimberly, their elder daughter, joined the family in Moscow for the final year after completing school in England.

While serving as attaché, the commander and his family had ample opportunity to visit various parts of the Soviet Union, from the Polish border to the Pacific coast, and from the Caspian Sea to the Barents Sea. They found Russia to be a country striving to equal the military, industrial and agricultural strength of the United States.

The commander said his recent Leningrad visit gave him the opportunity to meet, talk and exchange ideas with his counterparts in the Soviet Navy in the Leningrad area.

"It's amazing," he said, "but just a year ago such an exchange was virtually impossible."

COMOPTEVFOR

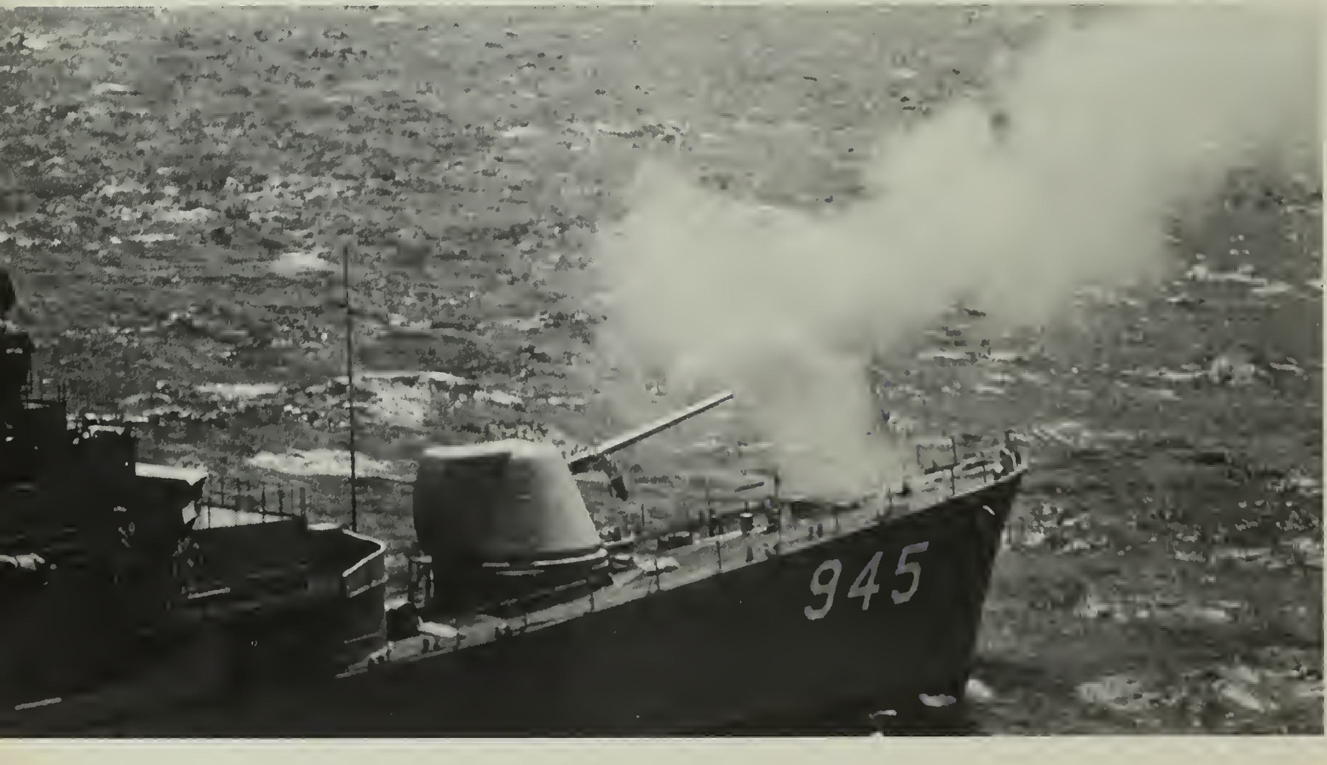
Debugging Systems Before Obligating Funds

One might readily associate "black boxes" with something magical, but to men and women of COMOPTEVFOR in Norfolk, Va., these words mean something entirely different. Here they are merely terms of the trade—a unique trade, at that.

Now you're probably asking, like a lot of others, what's COMOPTEVFOR? It stands for Commander Operational Test and Evaluation Force. Headed by Rear Admiral Robert R. Monroe, this organization is the Navy's sole independent operational test and evaluation (OT&E) agency for new weapons systems, ships, aircraft and equipments, including procedures and tactics. It further assists developing agencies in accomplishment of necessary development test and evaluation (DT&E).

Comprising some 1400 personnel, OPTEVFOR is in the business of operational testing of new weapons systems, in a simulated combat environment, before production contracts are signed. Rear Admiral Monroe calls the work "a tremendous safeguard to the taxpayer. We make sure a system will work at sea, and stay on the line, before we spend a lot of money on it."

The youthful-looking, bicycle-riding OPTEVFOR commander stresses the point that his command is involved in "operational" test and evaluation. At a recent presentation for a CNO executive board, he described what he termed an overdrawn example to emphasize the difference between the two types of T&E. He used a theoretical case of *Harpoon* missile and the NATO hydrofoil.



Above: F-4 Phantom II fighter aircraft of Air Development Squadron Four (VX 4) in flight. Facing page: The Navy's major 8-inch caliber lightweight gun is test-fired for the first time from a ship, the destroyer USS Hull (DD 945).

The admiral began, "For DT&E, the developing agency would properly optimize all conditions. He would preselect a missile for firing and peak and tweak it with field engineers and contractor reps doing most of the work. The PHM, also with technical people aboard, would sortie specifically for this test, in good weather. The PHM would probably steer a steady course and speed at a predetermined range and would launch a missile at an anchored target hulk. If a member of the contractor's launch team made a personnel error, the shot would properly be labeled a 'no test.'

"Now we'll consider the 'operational' aspects of test and evaluation.

"For OT&E, by COMOPTEVFOR, the PHM and the *Harpoon* missile would be handled only by the ship's regular crew; no engineers or contractor reps would be allowed aboard. Several *Harpoon* missiles, selected at random, would be loaded in the PHM's launcher a month or two before the firing test and subjected to the normal shipboard environment of high seas, vibration, sun and spray, gun firing and perhaps even paint chipping in port.

"The *Harpoon* firing would take place at the end of a typical five-day mission profile at sea, hopefully in poor weather. The PHM would close the target at maximum speed, using zigzag courses to avoid simulated return fire. The ship would have other tasks to perform (such as gun firing, contact reporting, navigation) during the run-in. The target might be a high-speed *Septar*, equipped with remote-control chaff launchers and expendable defensive electronic countermeasures (DECM) equipment to counter the *Harpoon*.

"The hydrofoil would have to detect the target, identify it, make tactical decisions on engagement, fire the missile, assess the effect of the shot and make decisions on subsequent action—all of which would be part of the evaluation. If the shot missed because of a personnel error among the crew, the firing would be evaluated a failure in some aspects, even though the *Harpoon* itself performed well.

"Although this example is somewhat overdrawn, it emphasizes that DT&E attempts to optimize all conditions and evaluates hardware only, whereas OT&T attempts to create combat conditions and evaluates the entire system, including the men in the loop and the interfaces with other systems."

According to DoD Directive 5000.3, "the T&E bible," in order to be classed as OT&E, testing must;

- Be planned by COMOPTEVFOR, rather than by the developing agency;
- Be conducted by fleet-type personnel, both for operation of the equipment and for maintenance;
- Be carried out at sea, under typical fleet conditions and against a simulated enemy who fights back;
- Have the actual testing supervised by COMOPTEVFOR, in terms of making on-the-spot decisions, and finally;
- Be reported independently to the CNO by COMOPTEVFOR.

The entire effort at COMOPTEVFOR is to save time and

LCDR J. C. Richardson and STCS J. H. Walters, members of COMOPTEVFOR staff.

money; to save time by planning, rather than by being forced into last-minute rescheduling to test critical aspects of new equipment, and to save money by fixing one model before production, rather than retrofitting hundreds once they are in the fleet. Admiral Monroe says, "What we're talking about here is *fleet readiness*. If the new equipment arriving in the fleet will do its job, and is reliable, then we have a fighting chance of digging our way out of the readiness hole. But if the new equipment has as many problems as the old, the fight will never be won. OT&E gives the Navy the only measure it has as to how the equipment will perform in the fleet and it provides this in time to decide whether to produce or fix."

At the end of April 1975, OPTEVFOR had 362 CNO-assigned projects for T&E of futuristic hardware, ranging from missiles to shipboard sewage systems. This represents a vast growth since the end of calendar year 1970 when the command had a total of 139 projects assigned. Since that time, there has been a steady increase, with 187 projects at the end of 1971, 211 at the end of 1972, 248 at the end of 1973 and 324 at the end of 1974.

All projects assigned to OPTEVFOR by CNO initially go through administrative processing and then are assigned by Operations and Plans to a warfare division. Responsible officers then plan the evaluation, develop test plans, conduct the tests at sea, and analyze test results. Following this, evaluations of test results are provided CNO by COMOPTEVFOR for a decision on operational effectiveness and operational suitability of equipment for the fleet.

This sounds relatively simple and clear-cut, but any of the 22 OPTEVFOR project officers and coordinators interviewed for this article will readily tell you it is a time-consuming, intricate and demanding process. A major consideration is the amount of travel involved, says Lieutenant Commander G. F. Monell, assistant for advanced integrated missile systems, surface warfare division. He has logged about 125,000 air miles in two and one-half years at OPTEVFOR.

According to Lieutenant Commander J. C. Richardson, assistant for medium range missile systems, you work from a "moving desk." It necessitates your "keeping a bag packed" at all times. They and others agree, however, that the work is "challenging, rewarding and exciting."

For the most part, OPTEVFOR project officers and coordinators welcome the opportunity to view and learn firsthand about all the latest proposed pieces of equipment for the fleet. It could become a bit mind-boggling keeping up-to-date simultaneously on 30, 40 or even 50 pieces of equipment, but as resident "experts" at OPTEVFOR headquarters, this is an absolute must. Whether the "expert" is an officer or one of the enlisted men, he is required to keep "up to speed" on any project assigned to him and be prepared to make a full report on a moment's notice.

This brings up a point which sets OPTEVFOR apart from most if not all other commands in the Navy. Due to the uniqueness of its role, as well as the fact that an individual assigned a project is labeled the "expert," all project officers and coordinators are on a one-to-one basis among themselves, as well as with the admiral. Anytime a project is being discussed, the "expert" is expected to take a firm stand on the points which he deems vitally important to the subject, even if it means taking an opposing view to a senior man.

Although generally senior types themselves, enlisted personnel assigned to OPTEVFOR readily admit that adjustment to this sort of working relationship presented certain inner conflicts in the beginning. In time, however, as one becomes thoroughly indoctrinated with OPTEVFOR's workings, this new way of doing things is accepted without hesitation. When the initial inner reluctance has worn off, enlisted men find themselves easily discussing and, on occasion, disagreeing with officers. As Chief Sonar Technician F. Miller put it, "They always listen to us here, whether our opinion is good, bad or otherwise."

OPTEVFOR is the scene of constant activity. With more than 300 projects on the line, and tasked to ensure that each one is fleet ready, there is little time for anything other than business during the working day. All assigned personnel agree on this, just as they do one other major point and that is the extremely high job satisfaction derived from work at OPTEVFOR. That was the most common remark by all interviewees at the command.

OPTEVFOR is many things, but most important, it's a little command doing a big and extremely critical job. All those hundreds and thousands of "black boxes" that command personnel deal with daily represent potentially great investments of taxpayers' dollars, so they must be scrutinized very carefully before production begins.

What's a "black box"? Very simply, it's any component box of a system, so called because it is painted black.

A history of OPTEVFOR follows.

—JO1 K. Testorff

Above: U. S. Navy Surface Effect Ship (SES 100B) speeds across the water during a test run. Below: Guided Missile Patrol Hydrofoil Pegasus (PHM 1) skims the waters of Puget Sound, Wash., at speeds in excess of 40 knots during a test.

RADM Robert R. Monroe is Commander of the Operational Test and Evaluation Force.

A Brief Historical Sum

COMOPTEVFOR traces its origin to the final months of World War II when the need arose for an effective means to combat Japanese kamikaze attacks.

On 2 Jul 1945, the Composite Task Force, U. S. Atlantic Fleet, was formed to develop tactics and evaluate equipment to counter the kamikazes. This force was commanded by Vice Admiral W. A. Lee and consisted of miscellaneous types of combatant ships with supporting aircraft and drone control groups.

When World War II ended, the Composite Task Force was consolidated with other fleet units doing development work and, in December 1947, was redesignated the Operational Development Force (OPDEVFOR). In the early years, COMOPDEVFOR flew his flag in USS *Adirondack* (AGC 15), but in the summer of 1949, the command moved ashore to headquarters at the Norfolk Naval Base.

During the ensuing years, changes were made to the mission and tasks to provide wider responsibilities in operational test and evaluation. For example, in 1952, the Tactical Development Group was formed and became part of OPDEVFOR. Changes were also made in the organizational structure, to expand test and evaluation capabilities and to form a subordinate command within the Pacific Fleet.

Accordingly, in May 1959, the command was renamed Operational Test and Evaluation Force (OPTEVFOR) to reflect more accurately its increased responsibilities. Headquarters then was moved to Camp Allen in Norfolk, in 1960, and has remained there since.

From inception until the early 1970s, OPTEVFOR was an operational command reporting to CINCLANTFLT. Its mission was primarily concerned with fleet introduction of new weapons systems, including operational test and evaluation and development of tactics.

In the early 1970s, however, OPTEVFOR was designated the Navy's sole independent agent for operational test and evaluation. This move was in response to Congressional and Secretary of Defense initiatives aimed at improving the defense material acquisition process. The force retained its former responsibilities and added the new ones of making early, independent assessments of operational effectiveness and operational suitability during the research and development (R&D) process.

In keeping with these new responsibilities, which moved OPTEVFOR's participation *ahead* of the production decision, the Force Commander now reports directly to the Chief of Naval Operations (CNO) as Assistant Director for Operational Test and Evaluation (OP-098C). In addition to these duties, RADM Monroe also serves as Director, Test and Evaluation Division (OP-983), thus giving T&E a strong focal point within OPNAV.

OPTEVFOR is a two-ocean operational fleet command with policy direction, technical and procedural guidance and financial support coming from CNO. For operational control of fleet units, COMOPTEVFOR reports to

STC F. Miller is one of the highly qualified specialists assisting in equipment evaluation.

ary of COMOPTEVFOR

CINCPACFLT, CINCLANTFLT and, when necessary, CINCUSNAVEUR. CINCLANTFLT provides administrative support for headquarters staff and logistics services for Atlantic Fleet operations. CINCUSNAVEUR provides logistic services for Sixth Fleet operations and CINCPACFLT provides logistic services for Pacific Fleet operations.

To permit COMOPTEVFOR to carry out his mission, he must closely follow all R&D programs of the Naval Material Command and the Office of Naval Research. CNO accordingly has authorized direct liaison between COMOPTEVFOR and the heads of developing agencies for all technical matters relating to Navy research, development test and evaluation programs.

The staff of COMOPTEVFOR is organized along flexible lines that give primary consideration to types of warfare and project administration. Evaluation of equipment and systems is carried out by personnel with operational experience in the type of equipment or warfare over which their divisions have cognizance.

On 1 Jul 1974, a major new division was created to coordinate operational evaluation of new classes of ships. Also in 1974, in response to increased emphasis, the Special Operations section was given divisional rank and was retitled the Ocean Surveillance Division. The following is an outline of headquarters organization at the close of 1974: comptroller, administrative division, operations and plans division, ship evaluation division, underseas warfare division, air warfare division, command and control systems division, surface warfare division and ocean surveillance division.

The Deputy COMOPTEVFOR, Pacific, located in San Diego, maintains liaison with CINCPACFLT, Pacific Fleet type, functional and support commanders and, when directed, heads of Pacific shore activities engaged in development work, including contractors. He administers, coordinates and supervises projects being prosecuted in the Pacific Fleet areas as directed by COMOPTEVFOR and prepares proposed project plans and reports as required. When requested by CINCPACFLT, he renders assistance for Pacific Fleet assist projects.

In addition to the deputy commander, OPTEVFOR maintains three aircraft squadrons and two detachments which assist in OT&E programs. These include Air Test and Evaluation Squadron One (VX-1), Naval Air Station, Patuxent River, Md.; Air Test and Evaluation Squadron Four (VX-4), Naval Air Station, Pt. Mugu, Calif.; and Air Test and Evaluation Squadron Five (VX-5), Naval Weapons Center, China Lake, Calif.; and New London Test and Evaluation Detachment (NLONTEVDET), Fort Trumbull, New London, Conn., and Sunnyvale Test and Evaluation Detachment (SUNTEVDET), Moffett Field, Calif. The three air squadrons are under COMOPTEVFOR's operational control only; administrative control remains with the appropriate type commander.

The Sanctuary Experience

Federal law today prohibits women from serving on board vessels of the Navy other than hospital ships and transports. Historically, women officers of the Nurse Corps and Medical Service Corps have been assigned to the medical departments of hospital ships for many years. In fact, Navy nurses first served aboard the transport ships USS *Mayflower* and *Dolphin* in 1913, and first served aboard the hospital ship USS *Relief* in August 1920.

In August of 1972 a program began with the purpose of studying the pros and cons of women at sea in other than medical billets. As a result, a limited number of women officers and enlisted members were assigned to

Above: Sanctuary crewmembers at chow. Right: Crewmember at bow of ship. Facing page: Women on the job aboard Sanctuary. Photos by LCDR T. Marquez, PHC Ralph Wasmer and PHC Ronald J. Oliver.

ship's company of USS *Sanctuary* (AH 17) in a pilot program to gain experience regarding the employment of women at sea in a nonmedical environment.

During the pilot program, approximately 23 women officers (including five line and Supply Corps officers and 18 nurses) and 97 enlisted women were assigned to USS *Sanctuary*, with as many as 69 of these Navy women being on board at the same time (total ship's company was about 400).

Women worked in all departments except engineering, and performed such tasks as deck seamanship, navigation, and assignment to general quarters stations and repair parties.

They were also assigned watches and other military duties comparable to their ratings and on an equal basis and rotation with men.

Some of the findings:

- The women aboard USS *Sanctuary* performed their assigned duties with expertise equivalent to their male counterparts.
- Both men and women among the crew generally had the same kind of comments and/or complaints concerning shipboard living conditions, with women crewmembers expressing a greater need for privacy and habitability than did the men.

With the recent decommissioning of USS *Sanctuary*, the Navy pilot program came to an end and its capability to assign women to sea no longer exists. The lessons learned from this pilot program, however, have been valuable. Namely, the commanding officer of *Sanctuary* gave a summary of his observations and recommendations as they related to the experiment. It is emphasized that these generalizations and recommendations apply only to USS *Sanctuary* (AH 17), a highly special-

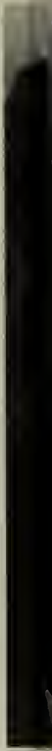
ized ship with features and functions unlike those of other naval vessels. (Indeed, it was the only ship in the Navy with accommodations permitting such an experiment to be conducted without extensive alterations.) These points were made in the summary report:

- There was no special qualitative screening of men and women personnel before making assignments; however, only single women without dependents were assigned. Members of one sex were not allowed in the berthing or sanitation areas of the others.
- The women performed their assigned duties in an excellent manner, indicating that women performed their assignments with equal ease, expertise, and dedication as their male counterparts in the same assignments. Difficult jobs were accomplished through mutual assistance of men and/or women personnel. For example, a weaker person (man or woman) was aided by a stronger person to accomplish a specific task. Crewmembers reported no problem with the strength of women personnel.
- The male members aboard ship (about 83 per cent of the crew) seemed to be either pleased with or indifferent to having women aboard ship. Most of the ship's crew appeared to have mature attitudes about the relationships between individuals. Antagonism was minimal. The morale of the ship's crew was high. Officers and enlisted men, including personnel both experienced and inexperienced with sea duty, generally believed that having women in the Fleet had some beneficial effects.
- The conclusion of the CO's observations was that women aboard USS *Sanctuary* performed their duties well. They caused no major shipboard problems, since no major changes in habitability for women aboard ship were required. He deemed the pilot program, within its set limits, a success.

If the legal restrictions—that is, Title 10, U. S. Code, Section 6015—which prohibit the assignment of women to ships other than hospital or transports, were to be removed, what would the Navy be expected to do?

It is probable that the Navy would first assign women to serve on large auxiliaries such as tenders (AD), fast combat support ships (AOE), replenishment oilers (AOR), ammunition ships (AE), combat stores ships (AFS), or amphibious ships (LHAs and LPHs), before attempting their assignment to other combatants. (The problems of designing a destroyer, for example, to accommodate a male-female crew staggers the imagination!)

Below from left to right: LT Peggy Harlow, LT Mary Anne Gardner and LTJG Bonnie Latsch. Above from left to right: Before assignment to Sanctuary, women went through damage control school at Treasure Island. Preparations for going ashore bring on a bit of teasing from shipmates. Linehandlers on deck of Sanctuary.



Based upon the possibility of such a contingency at some future time, the pilot program resulted in a number of recommendations.

- Initially, a cadre of experienced (seagoing) senior rated enlisted women would be available to provide leadership example and standards for the maintenance of good order and discipline.
- The recommendations suggested modifications of women's uniforms for shipboard duty, and a study of the feasibility of redesigning the women's berthing area to increase their feeling of privacy.
- While continuing to provide sexually segregated, but not preferential, berthing, the pilot program study gave emphasis to the necessity of "equal consideration and equal treatment concepts for all personnel."

Sanctuary *is no longer in commission and her crew—male and female—have been dispersed. But the Navy stands to profit from the pilot program, not only through its findings but in the experience of her crew. Special attention was given to ensuring that the unique seagoing experience of the women would not be lost. Their followup assignments are such that they can continue to add to their long-range career development. Four officers of the* Sanctuary *crew—three women and one man—have been assigned to the Naval Education and Training Center in Newport, where they were interviewed by Ensign Char Jensen, USN. Here is her report.*

- LT Bob Johns is a former navigation and operations officer aboard *Sanctuary*. He was relieved in that billet by LT Susan Canfield, the first woman graduate of NETC's Surface Warfare Officer School.

"We had to learn to ask 'who's there?' before opening the door of berthing quarters at certain times," LT Johns reminisced.

Adapting well to their new assignments and gaining their sea legs rapidly, the ladies, according to LT Johns, "did it all" with dispatch.

While training was simplified owing to less sophisticated equipment than is found on a destroyer, he adamantly maintained that the women had no trouble completing shipboard tasks. "Their only lack is training," he says, "which isn't their fault."

He cites inadequate existing berthing, scant operational training and the seeming penchant of women to use large amounts of water as sole preclusions to sending them to sea on a regular basis.

- Lieutenant (jg) Bonnie Latsch agrees with LT Johns' first two observations. LTJG Latsch recently returned to NETC Newport from duty as *Sanctuary's* first lieutenant. She is now assigned to the NETC yard patrol craft division.

LTJG Latsch feels the stringent 15-week curriculum that she completed at Surface Warfare Officer School in 1974 more than adequately prepared her for sea duty. She says she gained "an overall knowledge of the entire ship."

(→)

Above: During Unitas visit to South America ports, nurse provides some tender, loving care to young patient who was brought aboard Sanctuary for treatment. Below: Liberty-bound lady bids farewell to duty watchstander. Below center: Female phone-talker on bridge of ship. Facing page top: A woman of the Navy takes part in a training session at damage control school. Facing page bottom: Navy woman makes it "on the double" to her next shipboard assignment.

To prepare her for her future *Sanctuary* assignment while at SWOS (where she was the only female and senior member of the 99-person class), she studied inport and underway watchstanding, division officer management and operations subjects that include navigation and damage control.

As first lieutenant in *Sanctuary*, she supervised a deck force of 25 men and women.

- According to Lieutenant Peggy Harlow, the problems a seagoing administrative officer faces are uncannily like those at a small shore station. Following her tour in *Sanctuary* she has been assigned to NETC's Officer Candidate School operations division.

Aboard ship, her major adjustment was learning how to function as a division officer, something she hadn't done while assigned to Third Naval District headquarters in Brooklyn, N. Y.

Not one to be easily intimidated, LT Harlow stuck to her theory of "give yourself a chance—you can probably do it."

After the initial shock that women would deploy aboard *Sanctuary* in non-corps billets wore off, male crewmembers offered little resistance, LT Harlow remarked.

"We're different. We're new. To a large extent, it's a visible difference," LT Harlow says of the men's first reactions. If women went to sea as a matter of course, "people would just get used to each other."

LTJG Latsch echoes that with her own impression: "It was no big deal," she says of women going to sea.

- The fourth officer who sailed in *Sanctuary* is Lieutenant Mary Anne Gardner. She is a nurse and staff member at NETC's Officer Indoctrination School. While prior Navy experience proved invaluable, she "learned

more in the first three months aboard ship than in her previous three-year tour at the naval hospital in Bethesda, Md."

Health problems encountered during the goodwill cruise, "Operation Handclasp," to Colombia and Haiti in 1973, included those found in America, plus specific cases that involved parasitic diseases and birth defects.

Host country doctors and nurses jointly staffed shipboard clinics with their American counterparts, allowing them to share techniques.

LT Gardner herself had a health problem to cope with during shipboard assignment. While in Haiti she fell and injured her back. A doctor ordered her to soak in hot water. Consequently, she is forced to agree with LT Johns' comment that some women at sea may have a penchant for water.

Able to move only with great difficulty, she managed to negotiate *Sanctuary's* brow and ladders to the area where there reposed a big, blue bathtub, possibly the only one in the Fleet.

"When I finally had maneuvered myself into position to get into the tub," she recalled, "I felt guilty!"

As far as the four officers are concerned, the question of sending women to sea is moot. "We've proved that we could do it," LT Harlow contends. LTJG Latsch agrees, saying, "It got past the point of being an experiment because it worked."

LT Johns agrees, "Absolutely," he says, and LT Gardner points out once again, "Nurses have been going to sea for a long time."

Navy wives reacted to the situation of women serving aboard *Sanctuary* with considerable aplomb, LT Johns added. Many became "sea mothers" and adopted female crewmembers into their families. Inevitably, wives and adoptees often became personal friends.

What Bonnie Latsch had to say while a SWOS student still holds true: "I'm not trying to prove something. I'm not a women's libber. This is like orders to anywhere else in the Navy where I have a job to do."

So that, in small part, is the Sanctuary *experience. It does not mean that women will be sailing in Navy ships in the not-too-distant future. But in an era which has its share of controversial subjects here is one more to add to the agenda. Comment from the Fleet is expected—and invited.*

SEQUOIA:

Fitting out the Presidential Yacht

Not many men today receive orders from their captain to "replank the hull," but a small contingent of sailors in Washington did get such orders.

Last winter, the men, attached to the Naval Administrative Unit, replanked approximately one-third of the hull of *Sequoia*, the Presidential yacht. Berthed at the Washington Navy Yard, *Sequoia* is used by the President on the Potomac and Anacostia Rivers during the sailing season, April-October.

Built by the Mathis Shipbuilding Company and launched in 1925, *Sequoia* was christened *Savarona* and was originally owned by Mr. and Mrs. Richard M. Cadwallader of Philadelphia. The Cadwalladers sold her to the Sequoia Petroleum Company of Fort Worth, Tex., in 1928 and she was rechristened *Sequoia*.

The Department of Commerce purchased the 104-foot, seven-inch boat in 1931 for use as a patrol vessel. She kept the name *Sequoia* and in 1933 was transferred to the Navy for use as one of the Presidential yachts. Designated AG-23, she served Presidents Hoover and Roosevelt until 1936, then she was converted for use by the Secretary of the Navy.

During the period 1936-68, three other boats served the Commander in Chiefs. They included *Potomac*, which served President Roosevelt; the *Williamsburg*, in which Presidents Truman and Eisenhower rode, and the *Barbara Anne-Honeyfitz-Patricia*, one vessel with three names, that served Presidents Eisenhower, Kennedy, Johnson and Nixon.

Under President Johnson, *Sequoia* again became one of the Presidential vessels and her hull designation was dropped from Navy records. Johnson was the last President to use her on an overnight cruise; Nixon used

Facing page: Sequoia, before replanking and repainting by Navy Administrative Unit. Above: One of the oldest marine railways in the United States is still in operation at the Washington Navy Yard where Sequoia is overhauled. Right: Sequoia rests in a slip off the Potomac River after coming out of drydock.

her for brief respites from the rigors of office. This season President Ford, as expected, made his first cruise aboard *Sequoia* as the nation's chief executive.

Whoever rode *Sequoia* this year found her shipshape and ready to cruise at a moment's notice. This is due to the dedication of the men charged with her upkeep and the fact that all *Sequoia's* maintenance is performed solely by members of the administrative unit.

Sequoia's enlisted boat captain, Senior Chief Boatswain's Mate Lynwood Claytor, supervises her upkeep and maintenance. "We train all our own men and do all the work ourselves," he said. "The entire ship is made of wood and during overhaul we replace all deteriorated wood."

Each year *Sequoia* is pulled into drydock and overhauled. While in drydock she rests on one of the oldest operational marine railways in the United States, built in 1865.

Sequoia's hull, which was once made entirely of juniper wood, is now 80 per cent douglas fir. Chief Hull Maintenance Technician Joseph Brunner, one of the few HTs in the Navy today who still works with wood, explained:

"The reason for choosing fir is its availability and cost. We only accept knot-free because knots could cause seepage."

Most of the wood topside is teak, including the cap boards and deck, which is covered with painted canvas. All the handrails are mahogany and the bright work is chrome.

Below deck, the Presidential cabin is finished in walnut paneling. A small cedar closet is built into one corner of the cabin and two prints of Seminole Indian chieftains hang on the cabin's walls. Three other cabins, the captain's and two guestrooms, are finished in ash wood paneling. The crew's quarters and dining area are finished in teakwood paneling.

Topside are the pilothouse, and main and after salons. From his vantage point in the pilothouse, *Sequoia's* captain can keep in full view two Coast Guard boats that always accompany the vessel whenever the President is aboard.

As many as 22 persons can be served dinner at a single sitting in the main salon. Normally, the President sits in front of a replica of the Presidential Seal, facing a portrait of George Washington. For larger gatherings, a maximum of 40 people can be entertained buffet style in both the main and after salons. Meals are prepared and then served by the seven-man crew.

In addition to replanking of the hull and upkeep on the engine, *Sequoia's* crew makes all its own windscreens, curtains and canopies. Working in their own sail loft, the men can fashion canvas and cloth into many functional and decorative designs. And, if any of the upholstery needs repairing, they can handle that, too.

All in all, it is the men of the unit that are preserving this vestige of our nation's history and allowing our President to enjoy a few brief moments of rest and solitude.

—JO2 M. Szostek

Facing page from top to bottom: Two Sequoia crewmen measure canvas before cutting and sewing it into an awning. During each periodic overhaul, Sequoia is repainted and made shipshape for sailing. A cluttered main salon is transformed into a formal dining area by the crewmen. Top of page: Sequoia's fantail is a place where the President can relax after the rigors of a hard day. Above: Sequoia dinner setting. Right: Sequoia at her mooring after replanking and repainting.

from the desk of the Master Chief Petty Officer of the Navy

'Changing the Watch'

MACM John D. Whittet

When I first joined the Navy during World War II, I looked forward to the challenges of sea service. I was proud to have the opportunity to serve my country during wartime, when a country really needs its citizens' support. Three decades and three wars later, my feelings remain the same.

Partly because of these challenges and opportunities, I decided to make the Navy my career, and I dreamed of becoming a respected professional sailor. But, never did I dream that one day I would have the chance to represent our entire enlisted community as the Chief of Naval Operations' senior enlisted advisor.

My naval career since leaving Cranston, R. I., in 1943 has taken me to every corner of the world and has allowed me to work closely with some of our country's finest men and women. Being Master Chief Petty Officer of the Navy has been the most important and rewarding phase of my career and has left me with memories of people, places, and events that I shall never forget.

Now that the time has come to change the watch, I leave the MCPON billet with no reluctance. While there have been a few difficult times, the rewards of service and the privilege to serve far outweigh any disappointments.

I feel sure that my successor will also sense a feeling of fulfillment and purpose. The new MCPON, Master Chief Robert J. Walker, currently serving as COMNAVAIRLANT Force Master Chief, is an outstanding shipmate who will go forward in pursuit of the best interests of our country, our Navy, and our enlisted community.

One aspect of the MCPON job that Master Chief Walker will surely enjoy will be his frequent contact with the highest levels of naval leadership. During my tour I have been fortunate enough to serve with three Secretaries of the Navy, two Chiefs of Naval Operations, and three Chiefs of Naval Personnel. All of these men have worked diligently for their country and the Navy and have consistently provided the high level of leadership and inspiration necessary to maintain our Navy as the world's greatest.

Under the leadership of these men, I have witnessed many beneficial and necessary changes within the Navy's enlisted structure. These changes have had a significantly positive effect on the enlisted community as is reflected in retention figures which have risen from 11.6 per cent in fiscal year 1971 to 39.9 per cent for fiscal year 1975.

Paramount among these changes were a BEQ management system, and the implementation of the E-7 Selection Board process and the Quality Review Board. Other significant progress was made in sea/shore rotation policies, Navy uniforms, the enlisted evaluation system, and the human goals programs, which include equal opportunity, drug and alcohol rehabilitation, race relations training and leadership management. Two other improvements which I consider to be of the utmost significance were the implementation of the Master Chief Petty Officer of the Fleet/Force/Command program and, more recently, the new Enlisted Records Review Room at the Bureau of Naval Personnel.

None of these changes came easily. Change in a technical operating organization such as the Navy usually requires endless hours of discussion, planning, and difficult decisions concerning the details of any proposed alteration to the system. I attribute many of the advances in our system to two major factors: Teamwork and improved communications.

The Navy works well because people make it work well. Any contributions that the MCPON office may have been able to make have been supported by the efforts of men and women who have given us the assistance required to encourage fresh, new thinking. I believe these and all Navy members realize that such accomplishments can only be achieved with the cooperation, dedication, and support of everyone in the Navy.

Some of the recent changes are now institutionalized and their benefit to the system already evident. In other areas, such as the entire human goals program and the proposed sea pay proposal, much work remains to be done. I know that your new Master Chief Petty Officer of the Navy will continue to pursue these areas, and I'm sure that he will receive the same cooperation from the fleet that I have enjoyed.

Loyal support and administrative assistance have been particularly notable during my tour as MCPON by my office staff, whose services have been exceptional. My current staff includes YNC Bob Ferris (office manager and administrative assistant), YN2 Barbara Williams (clerk-typist and caseworker), and YN2 Bob Abbott (journalist and caseworker). I have also received valuable assistance and counsel over the years from past staff members YNC Jerry Traver, YN2 Catalina Lopez, and JO2 Steve Maddox, as well as the current Master Chief of the Command for Pers-5 UTCM Bob Evans. I thank each of them for their loyalty, dedication, and devotion to duty.

The immediate family plays a most important role in the career of any Navy member. I have been fortunate to have had support from my wife Helen. For nearly 30 years, which have brought us three children and six grandchildren, we have worked together as a Navy team. Helen continually asserts with pride that she is a Navy wife and a Navy mother.

I also want to thank the men who have served as Master Chief Petty Officers of the Fleet and Force. Each of these has contributed greatly to any success we have enjoyed during my tour by providing invaluable input and counsel.

But, most of all, I want to thank you—my shipmates—for your sustained support. I never traveled to a ship or station where I was not greeted warmly. The input I received from you during my travels was instrumental in providing counsel to our naval leaders whose responsibility it is to make changes when necessary in our regulations and policies. I will always be thankful that I had the opportunity to work and serve with the world's finest men and women, my shipmates in the United States Navy.

So, now the hour is at hand to pass the watch to Master Chief Walker. I wish him and his lovely wife, Frances, the best of luck during their tour. I can assure them they are in for four wonderful, exciting, and unforgettable years.

And, to my shipmates everywhere, I wish you Godspeed.

...and Introducing

The varied responsibilities associated with the position as Master Chief Petty Officer of the Navy (MCPON) demand the utmost scrutiny of candidates when the time comes to pick a new one. That is why only the most skilled and highly recommended individuals make

OSCM Robert J. Walker

it to the final rounds of selection procedures.

In the most recent search, four Navymen were in the running during final considerations. These included UTCM Robert L. Evans of BuPers, NCCM Charles H. Griva of ComNavSurfPac, PNCM Joe D. Pierce of CNATRA and OSCM Robert J. Walker of ComNavAirLant. The age span of these veterans was 38 to 46 and their active service ranged between 19 and 27 years. In a sense, these men represented the best of the Navy.

As is true in most competition, however, there can be only one winner and for MCPON it was Master Chief Operations Specialist Robert J. Walker. The third Navyman to hold this title, he relieved MCPON John D. Whittet in September. He and his wife, Frances, have four children: Robert, Jr., 18; Teri, 15; Michele, 12; and Michael, 12.

A native of Oxford, N. Y., Master Chief Walker was serving as Master Chief Petty Officer of the Force, Commander Naval Air Force, Atlantic, Norfolk, Va., at the time of his selection as the new MCPON. His prior service includes assignments in Korea during which he earned the Korean Presidential Unit Citation; USS *John F. Kennedy;* for which he earned the Navy Commendation Medal for meritorious service; and the Fleet Combat Direction Systems Training Center, Atlantic, for which he earned the Navy Achievement Medal while serving as Senior Enlisted Adviser. His duty stations have ranged from McMurdo Sound in the Antarctic (two tours) to Port Hueneme, and from Pensacola to Saipan.

In addition to his other awards, Walker holds the China Service Medal, Navy Occupation Service Medal, National Defense Service Medal, Korean Service Medal and the United Nations Service Medal.

In his spare time, the new MCPON is involved with civic league affairs and church-related activities. His wife is also an active community worker, having participated in little league clubs, charity drives and Navy Wives Club functions.

Strictly speaking, the MCPON is not a decision-maker. He may advise, request, suggest, comment, urge or recommend, but is not at liberty, for example, to secure a humanitarian transfer, discharge, or cut a set of special orders. He is an advisor who, by virtue of his office, has direct access to the CNO and CNP.

Even though the MCPON has direct access to the CNO, he does not bypass the chain of command by consulting the CNO every time a sailor has a personal problem. Normally, problems acted upon have been routed to him via the chain of command or are of concern to most Navy men and women.

When the MCPON goes to bat for a Navy person or a cause common to all Navy personnel, he depends entirely on strength of argument and reputation of his office. He reasons on behalf of the enlisted community. The more logical or meritorious the case, the more favorable the consideration is likely to be. If favorable action cannot be taken, the parties involved are notified immediately. All letters addressed to his office are answered.

The job of MCPON requires extensive travel throughout the fleet. In this travel, he keeps abreast of current thinking and has an opportunity to learn what's really happening throughout the Navy.

With his new position, Walker assumed many duties other than Senior Enlisted Advisor to the Chief of Naval Operations (CNO) and Chief of Naval Personnel (CNP). In addition to his advisory functions, he is called upon to testify before Congressional committees and subcommittees. He also serves in an advisory capacity on various boards, including Quality Control Review Board (advisor), Rating Review Board (voting member), Master and Senior Chief Selection Board (advisor), Navy Relief Society Advisory Board (member), National Naval Reserve Policy Board (advisor), Uniform Board (voting member), Navy Wives Club of America (liaison), Nonappropriated Fund Board (voting member), Navy Federal Credit Union (advisory panel), Fleet Reserve Association (liaison), Navy Resale System Advisory Board (member), National Board of Governors, USO (member), and Enlisted Advisory Board to the Chief of Naval Operations (chairman).

If you have a problem, check first with your supervisor or leading petty officer. If it can't be resolved at command level—most problems can—the Master Chief Petty Officer of the Navy stands ready to render assistance. You may write or, for more urgent matters, call his office at autovon 224-4854 or commercially at (202) 694-4854. His office may be reached after working hours by dialing the same numbers and recording a message on the code-a-phone. He can't always help, but he always makes the effort.

NAVAL WAR COLLEGE

Off-Campus and Correspondence Courses

The June 1975 issue of ALL HANDS contained a *Questions and Answers* feature on pages 32 through 37. On page 34 the following question and answer appeared:

Q. *Can I get a Naval War College Degree through nontraditional means?*

A. Yes, there is an extension course offered at night in the Washington, D. C., area, and a complete correspondence course package offered by the Naval War College. For further information, call ...

Advertising is sometimes a boon to both students and educational institutions but the seven short lines in ALL HANDS have generated a significant reader response based on printed misinformation, centering around the word "degree."

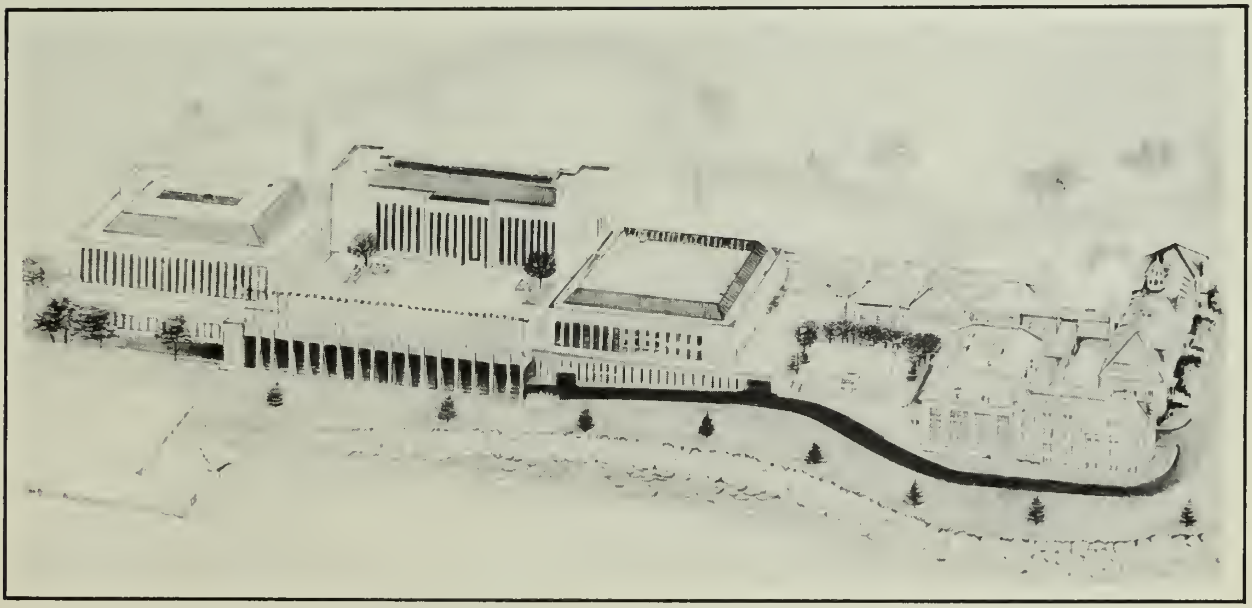
Let us explain. The Naval War College does not grant a degree to graduates of its resident course of studies, to those students who undertake courses by correspondence or to those attending the Washington, D. C. off-campus course. The Chief of Naval Personnel has, however, recognized completion of the *resident* curriculum as the professional military counterpart of an academic master's degree and it is so considered for officer personnel management purposes.

The Naval War College Center for Continuing Education parallels resident courses by offering a one-diploma Naval War College correspondence curriculum of approximately 1000 hours of study. Although students are not obligated to pursue the entire diploma program, they are encouraged to consider the matter. Correspondence courses are recognized as enhancing a naval officer's career as evidenced by the following quotation from the March 1974 *Officer Personnel Newsletter* (NavPers 15892):

"Reporting seniors are encouraged to document, in the comments section of fitness reports, individual efforts at self-improvement. Such documentation should include correspondence courses from various service colleges ... This information is important to Navy Department personnel managers and is often an item of consideration by selection boards."

The 36-week off-campus course given in the Washington, D. C., area is limited at this time to Strategy and Policy, one of the three core areas studied in both residence and in the correspondence courses. A Naval War College certificate of completion acknowledges that a student successfully passed this off-campus graduate seminar study program.

If the question on page 34 were to read: "Can I study Naval War College courses through non-traditional means?" ... the answer would be correct, except for the phone number. The number for this purpose at the Naval War College is A/V 948-3751.



This is an artist's conception of the Naval War College, Newport, R. I., by Anthony Sarro. Left to right: Hewett Hall, under construction; Conolly Hall, currently in use; Colbert Plaza—at water's edge, currently in use; Spruance Hall, currently in use; plaza between new and old buildings, now under construction—has not yet been named; original buildings of college.

• VOLUNTEERS NEEDED FOR '77 WINTER-OVER ON THE ICE

Operation Deep Freeze volunteers are now being solicited by BuPers for the 1977 Antarctic winter-over party. Interested personnel from eligible rates and ratings must submit applications in time to reach the Chief of Naval Personnel not later than 15 Nov 1975 in order to receive full consideration. Applications will continue to be reviewed after that date, but the majority of selections will be made from requests received before 15 November. The best qualified personnel will be selected for transfer and screening in April or May 1976, with deployment to Antarctica about October 1976, The duty will conclude about November 1977. Complete details concerning eligibility; requirements; special benefits, including special duty pay of $150 per month for six months; and application procedures can be found in BuPers Notice 1300 of 6 Jun 1975, and change one of 9 July 1975.

• APPLY NOW IF YOU HOPE TO BECOME A 1976 WHITE HOUSE FELLOW

If you're interested in becoming a White House Fellow next year, now is the time to apply, especially since applications are very thorough and require some time to complete. They must be postmarked not later than 28 Nov 1975 for consideration, and may be obtained until 10 November by writing the President's Commission on White House Fellowships, 1900 E Street, NW, Washington, D. C. 20415. Of the 2300 applications received by the Commission last year, 14 Fellowships were awarded. Of these, two were Navy -- Lieutenant Commanders Dennis C. Blair and Randall W. Hardy. Through this program, clearly exceptional, career-motivated Navy personnel between the ages of 29 and 36 may be eligibile for a one-year assignment to the White House staff or other top level office in the Executive Branch. Candidates will be selected from nation-wide applications by the President's Commission on White House Fellows and will be designated by the President. Full details on the White House Fellows Program are contained in BuPers Notice 1560 of 16 Jul 1975.

• FIVE SHIPS TO TEST 80/20 MANNING CONCEPT

The names of the ships selected to participate in the test of the 80/20 ship manning concept were recently announced. They are: USS O'Callahan (FF 1050), USS Agerholm (DD 826), both homeported in San Diego; USS Jonas Ingram (DD 938) and USS Edward McDonnel (FF 1043), both based in Mayport, Fla.; and USS Richard E. Kraus (DD 849), Charleston.

Under the 80/20 concept, these ships will be manned by 80 per cent of the crew normally assigned to the ship. During mobilization, and for specific training periods, the crew will be augmented by inactive duty selected Reservists who will constitute the remaining 20 per cent. Reservists will come from five ship reinforcement units (SRUs), two of which will be located in the general vicinity of their ships' homeport. Three such units will be located inland to test the feasibility of locating SRUs in cities remote from major Navy ports. Location of the SRUs has not been announced.

• FIVE MORE COLLEGES JOIN NAVY CAMPUS FOR ACHIEVEMENT

Five schools were recently added to the growing list of educational institutions participating in the Navy Campus for Achievement (NCFA) College degree and certificate program. They are: Shelby State Community College and State Technical Institute, both in Memphis, Tenn.; Skagit Valley College, Mount Vernon, Wash.; Los Angeles City College, Los Angeles, Calif.; and Mohegan Community College, Norwich, Conn. NCFA schools offer centralized administration, information and financial assistance for Navy students, waive residency requirements and accept credits earned through "non-traditional" means such as service schools, CLEP, PACE, correspondence courses, other self-study programs and, in some cases, for military on-the-job experience.

- SASEBO SUPPORT FUNCTIONS TO CONSOLIDATE

Support functions now being performed by Fleet Activities at Sasebo, Japan, naval complex are scheduled to begin consolidation in the near future. The move is being made as part of the Navy's continuing efforts to ensure maximum use of manpower and equipment resources. The consolidation is to be completed by the end of June 1976. Officials said the action will not have an adverse effect on the operating forces of the Seventh Fleet. USS White Plains (AFS 4) is to be reassigned permanently to NavBase Yokosuka and USS Mars (AFS 1) and Commander ServGru Three are to remain at Sasebo for the present time.

- RELIEF FOR FLIGHT SURGEON SHORTAGE IS ON THE WAY

BuMed recently introduced the Aviation Medical Officer (AMO) Program, designed to help relieve the critical shortage of flight surgeons. Navy doctors trained as AMOs will be assigned to base dispensaries and other activities to provide primary patient care and will act as backup support for flight surgeons. They will perform flight physicals, provide routine medical care for uncomplicated illnesses involving aviators and other air-crew personnel, and be authorized to sign aeromedical clearance notices.

AMOs are now being trained at the Naval Aerospace Medical Institute, Pensacola, Fla. The curriculum covers all aspects of aviation medicine, including physiology, flight examinations and special medical problems unique to flying personnel. AMOs do not receive flight training nor are they assigned duty involving flying. They will be assigned a secondary naval officer billet classification (NOBC-0008). Four-week orientation courses are scheduled to begin 3 Nov 1975, 2 Feb and 3 May 1976. Interested medical officers should apply via BuMed to the Commanding Officer, Naval Health Sciences Education ond Training Command, National Naval Medical Center, Bethesda, Md. 20014.

- PRESIDENT FORD BREAKS GROUND FOR MILITARY MEDICAL UNIVERSITY

President Gerald R. Ford joined the Secretaries of defense and the Navy and congressional leaders recently in ground breaking ceremonies for a new military medical school. The Uniformed Services University of the Health Sciences (USUHS) will be located on a 90-acre campus on the grounds of the National Naval Medical Center, Bethesda, Md. The first building, a $9.4 million Basic Sciences classroom and laboratory building, is scheduled to be completed in Fall 1976. Current plans call for several other buildings to be added over the next few years.

USUHS was established to train doctors for the Army, Navy, Air Force and Public Health Service and will accommodate 600 students when completed.

Clinical training will be provided by the National Naval Medical Center, Walter Reed Army Medical Center and Malcolm Grow Air Force Medical Center. Other military and government medical facilities in the capital area will be used by the students such as the National Library of Medicine, the Armed Forces Institute of Pathology, and the Center for Disease Control.

Upon graduation, students will receive a Doctor of Medicine Degree, be commissioned in one of the uniformed services, and will be required to serve at least seven years' active duty. The charter class of 36 students is to begin studies in the fall of 1976 and will be temporarily housed at the Armed Forces Institute of Pathology until USUHS construction is completed. (For more information on this school, see the article in the December 1974 issue of ALL HANDS, Page 34).

- LAST CALL FOR 1975 ALL-NAVY CARTOON CONTEST ENTRIES

If you don't have your All-Navy Cartoon Contest entry completed yet, you'd better get busy. Deadline for entries is 1 October. Competition is open to personnel on active duty in excess of 90 days, and their dependents. Entries this year will be judged in three separate categories: active duty, dependents and Bicentennial-related. Contest rules may be obtained in ALL HANDS, June 1975, p. 52, or from your special services officer.

- LOOKING FOR A GOOD PLACE TO EAT? TRY ONE OF THESE

Winners of the 1975 Ney awards were recently announced by SecNav. The awards, which are presented for outstanding accomplishment in enlisted dining facility operations, are made each year to shore commands and large, medium and small afloat commands. This year's first place winners are NAS Whidbey Island, Oak Harbor, Wash.; USS Illusive (MSO 448); USS Concord (AFS 5); and USS Canopus (AS 34). Second place awards went to NavTechTraCen Corry Station, Pensacola, Fla.; USS Welch (PG 93); USS Dale (CG 19); and USS Constellation (CV 64). Third place winners are NAS Guantanamo Bay, Cuba; USS Cree (ATF 84); USS Shasta (AE 33); and USS Ajax (AR 6).

- 10 OCTOBER PROCLAIMED 'NAVY UNIFORM DAY'

Friday, 10 Oct 1975, has been officially designated "Navy Uniform Day" in honor of the Navy's 200th Birthday. On that day, all active duty, Reserve, NROTC, NJROTC, Sea Cadets and retired Navy people will be encouraged to wear their uniform, preferably service dress blue. "Uniform Day" is designed to demonstrate the number and occupational variety of Americans who are a part of the Navy family. This year Navy Birthday, 13 October, falls on a legal holiday, and the preceding Friday, 10 October, has been selected to officially open the Navy Birthday weekend. Further details on plans for the Navy Birthday celebration are contained in OpNav Notice 5060 of 18 Jun 1975.

- "HOW TO" FILM ON PREPARING "ENVIRONMENTAL IMPACT" STATEMENTS

A Navy film entitled "Preparation and Processing of Environmental Impact Statements" is now available for commands wishing to provide staff indoctrination necessary for compliance with the National Environmental Policy Act (NEPA). The 20-minute film "walks" a prospective statement or assessment preparer through the origins of the law, applicable instructions, content of statement or assessments and review and filing procedure. Those interested in obtaining short-term loans of the film should forward requests directly to CNO (OP-453), or call E. W. Johnson on autovon 22-73639.

• VA PUBLICATIONS AVAILABLE THROUGH NAVY SUPPLY SYSTEM

Career Counselors, Senior Enlisted Advisors and other interested individuals are reminded that various Veterans Administration forms and pamphlets are available through the Navy supply system. These publications contain information on VA benefits in such areas as education, insurance and loan guaranty entitlements. For more information, see BuPersNote 1790 of 4 Jun 1975.

• USS WAINWRIGHT VISITS ROMANIAN PORT

USS Wainwright (CG 28) recently became the first U. S. Navy ship to visit Romania since World War II. During a four-day visit to the Black Sea port of Constanta the ship was opened to visitors and her crewmen were permitted to visit the Romanian training ship "Mircea." The port visit was a part of an effort to promote good will and mutual understanding between Romania and the United States.

• FLEET READINESS PLAN ANNOUNCED

By mid-1976, an additional 6000 petty officers will be at sea in a move to elevate fleet manning to 100% and drop shore manning accordingly.

Approved by CNO, this fleet readiness improvement plan essentially calls for screening service records of about 20,000 excess and overtoured petty officers ashore and involves the following specific actions:

- Phased return to sea of those in undermanned ratings who have been ashore in excess of 24-36 months (depending on specific shore assignments);
- Selective return to sea of petty officers in overmanned ratings to ease burdens on undermanned ratings (i.e., watchstanding, master-at-arms, etc.,) by allowing them to devote full efforts to skill-related matters; plus:
- Selectively extending short sea tours and decreasing long shore tours.

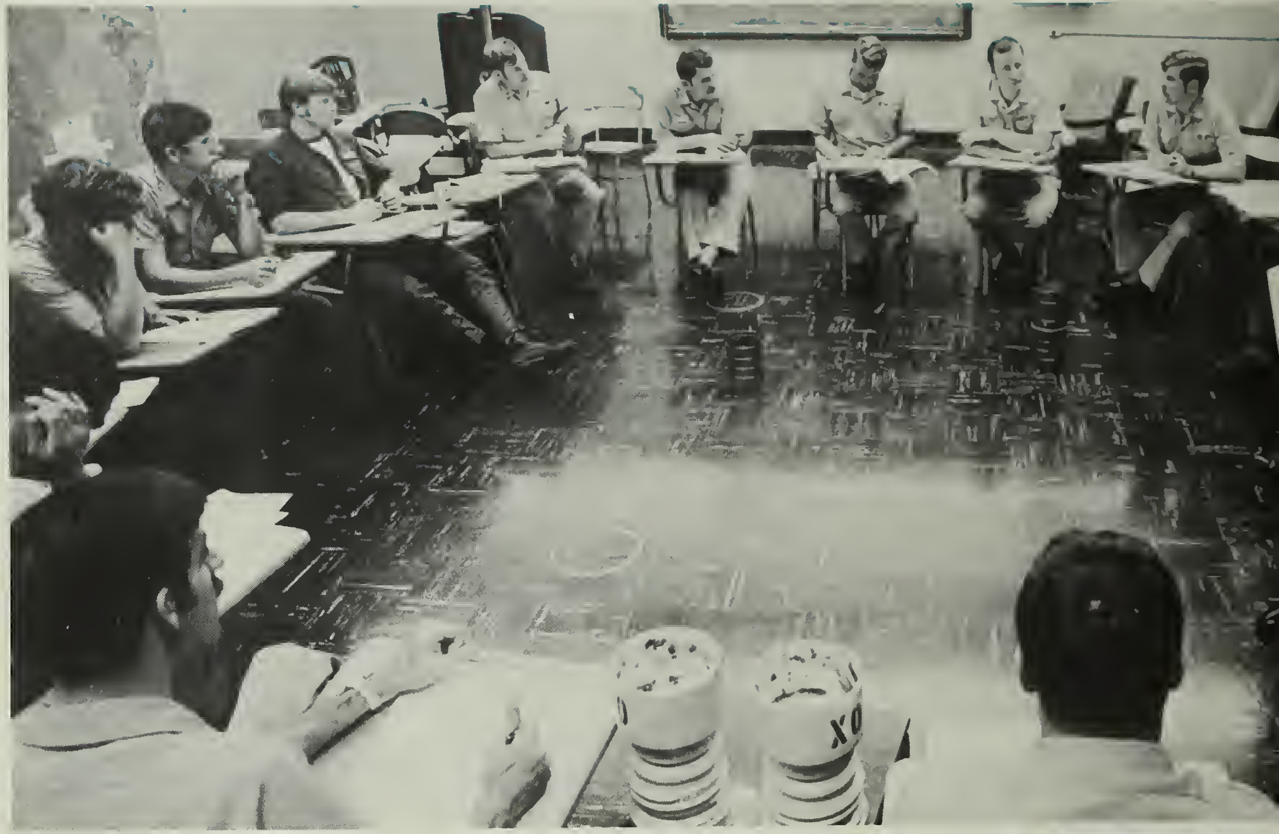
Under the plan, the first orders will be issued in December 1975 for February 1976 moves. In January, selected personnel at sea will receive extension notices. These initial rotation actions will be concentrated on alleviating E-5 through E-9 shortages in ratings manned at less than 90% at sea.

Total numbers of personnel affected in each rating have not been determined and will not be known until the sea/shore rotation length review is completed, probably by 1 Oct 1975. However, since the plan deals with personnel ashore in excess of tour lengths, as well as some whose rating tour lengths will be adjusted, it will involve all Navy ratings to some degree.

Under this new policy, personnel will not be extended at sea beyond the five-year maximum unless it is by individual request. Shore tours will remain a minimum of 24 months. Looking ahead, three years at sea and three years ashore remain the ultimate sea/shore rotation goal. All personnel affected by this Fleet Manning Program will be notified a minimum of 60 days in advance of any change in their status.

Aware and Communicating . . .

Skinny Dragons c



Above: VP-4's Human Relations Council. Right: YN3 R. A. Dobson, Race Relations Team, shows team sponsor, ENS T. L. Huggins, some of the literature he's assembled for Black History Week. Far right: YN3 E. C. Ku, administrative department, is a member of the Environment Team. Squadron has four human relations teams.

f VP-4

PATRON FOUR

The "Skinny Dragons" of Barbers Point, Hawaii-based Patrol Squadron Four have a long tradition of operational excellence, but they also pride themselves on an effective human relations council. Composed of 24 members, this group has differences in levels of enthusiasm, but all agree their efforts are worthwhile.

In the words of Commander James A. Messegee, the squadron's commanding officer, "We've got a good, effective council because we've got good people in the program. They work at it . . ."

VP-4's council, however, didn't always function as effectively. In the fall of 1974, it was concluded that the existing group wasn't fully effective as a tool of leadership or in responding to needs of squadron personnel. Thus, the council was reorganized into four teams, each with specific responsibilities in the areas of race relations, environment, drugs and alcohol, and E-4 and below.

Under this new organization, all members of the teams are volunteers and each team has an officer sponsor to assist, while leaving control of activities to the members. At regularly scheduled council meetings, all levels of the chain of command are represented, including the CO, XO, department heads and interested division officers.

VP-4's human relations council reinforces the chain of command, while the teams maintain one-to-one contacts with individuals in the shops and air crews. This allows the council to fulfill the twofold purpose envisioned—to address and study real and perceived problems, and to provide an improved flow of information, both up and down.

"In a very real sense," says CDR Messegee, "the council is a safety valve, relieving pressures before they can build up."

About the time VP-4 was reorganizing its program, the command underwent a human resources availability assisted by the Pearl Harbor Human Resources Management Center. The "command atmosphere" survey

conducted in the availability provided a broad statistical information base which was immediately used to pinpoint areas needing attention.

One of the first concerns was to make command personnel aware of the council and the special teams. A centrally located bulletin board was devoted to pictures and names of members of each team. In addition, the members made a special effort to circulate more and introduce themselves.

"People are aware of us now; they know who we are," says AMS3 J. B. Youngs. "That's a big improvement over the old council." AX2 G. A. Kerr adds, "When we started out, there was a feeling that the command lacked sensitivity to minor problems or petty grievances . . . . We didn't have much credibility . . . people didn't trust us and some of us didn't trust the chain of command. Now we've learned what it takes to get changes made in the command and people have more confidence in us . . ."

The primary effect of VP-4's human relations council so far has been in the area of improved awareness and communications, but it also has scored some concrete achievements as well. The environment team, reports SN D. T. August, "assisted in getting a vacuum cleaner donated by squadron wives to the men living in bachelor enlisted quarters, and some progress has been made in things like watchstanding and the general atmosphere at the BEQ."

According to council member YN3 R. A. Dobson, "The only way we can be effective is if every individual contributes something and believes in what he's doing. The people make the program. Our council has dedicated, determined people and it's been good for squadron operations and the command as a whole."

This is evidenced in several squadron statistics. For fiscal year 1975, VP-4 has averaged 54 per cent first-term reenlistments. In the August 1974 promotion cycle, 100 per cent of participating personnel passed the examinations and 77 per cent were promoted. Also in 1974, the squadron received the Arnold J. Isbell Trophy as the Pacific Fleet VP squadron demonstrating the "greatest degree of professionalism and effectiveness during operational ASW missions."

—Story by JOCM K. R. Woodhead
—Photos by PH1 W. B. Fair

Facing page top left: LTJG J. W. Rightmire, squadron Human Relations Officer. Top right: MS2 V. M. Francisco, a member of the Race Relations Team. Bottom left: LTJG J. C. Michelsen, communications officer, and Environment Team sponsor. Bottom right: AN D. L. Kimmey, line division, and member of the Race Relations Team. Below: AX2 G. A. Kerr, maintenance department, and member of Race Relations Team.

Diving School

"Red diver! Topside! Lie on your back!" The instructor's order is relayed by a student through a metal box which, seconds later, crackles, "Red diver! Lying on my back!"

"Yellow diver! Roll over on your left side! Then stand up on the workbench!"

Wind whistles over the deck and the water laps against the sides of the 3500-gallon training tank. The barge which houses this Second Class Diving School is docked at the Naval Station San Diego pier. The majority of all Navy divers get their training here, along with the Army, Air Force, Marine Corps and some civilian divers.

The school, an annex of Service School Command, San Diego Naval Training Center, offers a four-week scuba course and a 10-week hard-hat diving course. Hard hat refers to the outfit worn by the diver—190 pounds of equipment from headgear to shoes. After five weeks the hard-hat divers are ready to don their suits and take a test dive in the 10-foot training tank. They must be helped into the outfit, starting with the shoes—17½ pounds each—to the 84-pound weight belt and, finally, the breastplate and helmet, 54 to 64 pounds.

Once the diver is lowered into the tank the instructor begins with simple instructions. Primary means of communication is voice, which the diver receives through his headgear. He responds to each command as he performs the ordered task.

The student is getting an idea of how to maneuver himself in the outfit, which has buoyed considerably

Left: Petty Officer 3rd Class Gary Loberg is ready for his training dive. At the very least, he likes his work. Right: Novice divers may be observed from portholes near the bottom of the diving barge training tank.

in the water—it now "weighs" only 20 to 30 pounds. Since more than one diver uses the tank at a time, students are given color codes so that the instructor can identify each when giving orders.

A secondary means of communication is the hand signal system on the lifeline and air hose which students are very familiar with before they take the test dive. In case the talk or voice system should fail, the diver could be signaled back to the surface by tugs on the hose. The diver can also control his own buoyancy with a valve, although he is discouraged from using this means of control on his first dive.

All instruction at the school is given by first class or master Navy divers. There are only two master divers at this school—Chief Petty Officer Frank J. Buski and Senior Chief William A. Gholson. School director is Lieutenant Commander Richard G. Brereton.

"The Second Class course is booked up until next fiscal year," said Buski. There has been even more competition for entrance to this school since Key West closed its diving school, and Washington, D. C., discontinued its second class diver training.

There are usually 20 to 30 students in a class and a new group starts every fourth week. Two or three classes are going on all the time. There are four instructors per class.

"These classes are really too large," said Buski. "An ideal class would be 10 to 14 students. The more we can individualize instruction, the better the product we can turn out."

Entrance requirements for the Second Class Diving School are stiff. The student is obligated to at least 18 months of service and most have served in a ship for a year or more before coming to San Diego. There is a rigorous physical test and an indoctrination dive which discourages many would-be divers. Except in special circumstances, divers must be age 30 or under to start the course.

Once the course is completed, the Navy has plenty of work for the second class diver, including searches, ship repair, reconnaissance work and salvage diving.

It's a tough course, according to Buski, with a lot of competition for entrance. But quite a few men apparently find the idea of a diving career worth the challenge.

—Story by Laura Beach
—Photos by PH2 Douglas Cunningham

UNDERWATER PHOTOGRAPHY

When the average person thinks of a photographer, he usually visualizes a person with camera in hand and feet planted on solid ground. But the visualizations of nine sailors assigned to the Atlantic Fleet Combat Camera Group (AFCCG) are somewhat different. They think of a person with camera in hand, with scuba tanks and swim fins to propel him through the dark depths of the ocean.

The nine men assigned to the Norfolk-based unit's Diving Locker specialize in underwater photography. They have all attended Navy photo school in addition to a variety of diving schools.

Underwater photography is demanding and requires a special breed of man, one with a unique blending of courage, strength, intelligence, and an artistic eye.

Chief Photographer's Mate Richard Johnson, a qualified 1st Class Diver (hardhat and mixed gases), who heads the diving locker, has these qualifications.

Johnson says, "When we are underwater we're in an alien environment and not only must we concern ourselves with the many things that allow us to survive, but also we must keep in mind proper focus, exposure and composition of photographs."

He said that of the more than 2500 photographers in the Navy, there are only about 25 who specialize in underwater photography.

Johnson and his men do both still and motion picture photography, using a wide variety of cameras installed in specially designed underwater housings. Photography accomplished by divers covers a wide range of subjects such as ocean floor surveys, salvage operations, cavitation studies and ship hull surveys.

Like other divisions of AFCCG, the diving locker is mobile, with men and equipment ready to deploy anywhere in the world in a matter of hours. Chief Johnson, a veteran of 22 years' naval service, 12 as a diver, said that their varied assignments carry him and his men from the ice-covered waters of the arctic to the tropics.

The diving and photographic equipment in the inventory includes inflatable, outboard-powered boats; electric-powered swimmer propulsion units; and the latest in scuba, camera and underwater lighting equipment.

In addition to knowing how to operate a wide range of equipment, the men can also perform maintenance and field repair. "We have to be able to repair our equipment," said Johnson, "because one day we might find ourselves with a defective piece of gear while we are 1000 miles from the nearest repair point. The success of an operation depends on our being able to dive and get desired photographs on schedule."

Physical fitness is a must for divers and those assigned to AFCCG keep in peak condition with a minimum of 30 hours spent each month in strenuous exercise. Johnson said he and his men do group rather than individual exercise because it develops team spirit and comradeship essential in operations where safety is dependent on the buddy system.

Although the nine men assigned to the diving locker come from widely different backgrounds and have wide age differences, they all have two things in common: their love for diving and interest in photography.

—Story by PHC Arnold A. Clemons
—Photos by PH1 Steve Waterman

Facing page: Taking a break from his photographic tasks, Chief Photographer's Mate Richard Johnson feeds several curious groupers. **Above:** In the waters off Andros Island in the Bahamas, divers work over sunken hulk of Navy landing craft. **Right:** Armed with underwater cameras and lighting equipment, divers photograph sunken hulk.

PROFILES OF THE FLEET

Yeoman 2nd Class John D. Adkins

Crossroads

"You might say I stand at the crossroads," said Yeoman 2nd Class John D. Adkins. "If not where the rubber meets the road, then, where the paper meets the file folder."

Could he be serious?

Then a smile lights up the corners of his eyes; it moves down and breaks across his face. That's the humor of Adkins, a very human person, determined to treat people as people in an age of dehumanizing technology.

Adkins is serving aboard the newly commissioned nuclear submarine USS *L. Mendel Rivers* (SSN 686). For his ship's 120 officers and men, he and his boss—Chief Yeoman Gene Simpo—help with the details, large and small, of military careers.

John is seriously interested in "his people," all aboard the nuclear submarine. He gets deeply involved in the details of individual reenlistments, school requests, medals-awards, and even pinch-hits as a career counselor.

His typewriter sounds like a replay of the gunfight at OK Corral. In the carriage you'll find anything from an award request, a piece of correspondence, to an explanation of a new reenlistment program. He deals in career-moulding items.

"Being on board a sub is independent duty of sorts," he said. "The men really depend on you for so many things and I owe it to them to let them in on everything that might benefit their careers.

"We all kid about every action starting with a piece of paper but there's a great deal of truth in that. The job is challenging because all the ship's operations orders, instructions, notices, plans, correspondence and service records come this way.

"Although the buck doesn't stop at my desk, you might say it pauses there to be processed."

John and his wife, Georgia, are both Navy juniors, and submarine juniors at that. His father retired off USS *Trigger* as a chief electrician's mate in 1966. Georgia's dad is a retired chief electronics technician—Emmitt J. McPhearson—who served aboard the fleet ballistic missile submarine USS *Patrick Henry*. The Adkinses met in Groton and married in New London—where else?

As a second-generation submariner, John is proud of his work and the challenge and satisfaction that such a life offers.

"For a career in administration, there's hardly a better assignment. You have a chance to work in virtually every area of your field. This keeps me alert, gives me a chance to learn time management skills, and develops my abilities to the fullest," says Adkins.

—Story by JOC Scott Hessek
—Photo by PH2 Karl Simon

Chief Radioman Amos Parker Masters Aikido

All sorts of Americans are dancing the "kung fu" and even children know how to fake a karate "chop," but who knows the graceful moves of "aikido?" One man who does is Navy Chief Radioman Amos L. Parker of Yokosuka's Naval Communications Station.

As a matter of fact, this chief petty officer is one of the most accomplished non-Japanese practitioners of this martial art in the entire world. The six-foot, 200-pound Navyman has studied the Yoshinkai form of aikido over 12 years to become one of only two people outside Japan with a fourth-degree black belt.

"Aikido" (pronounced AH-EE-KEE-DOH) is a relatively new name for an ancient Japanese method of self-defense. Its name translates as "harmony," "mind," and "way." Its basic premise: to follow the path of least resistance.

As Chief Parker explained it, aikido differs from other martial arts in style as well as philosophy. "The movements are smooth and circular, with an emphasis on correct balance," he said, "and the object is to become one with the opponent, not to oppose him. We use no jabs or punches.

"This is definitely a passive art," he continued. "We try to relearn what people have forgotten from their childhood: being rigid can be a weakness. We simply redirect opposing forces; we don't initiate them."

The 38-year-old chief took his first lesson in Yokosuka's Thew Gym in 1963, only two days after arriving in Japan to work with U. S. Naval Beach Group, Western Pacific Detachment. He now teaches about 10 students on Monday and Wednesday evenings in the same gym.

In the style of aikido that Chief Parker studies, the basic stances are taught first, from which the proper attitude should follow. "Beginning students sometimes get discouraged when they find themselves 'dancing' instead of throwing people around," he said. There are about 150 basic techniques, with about 10,000 variations. "You always have to start with the basics," he said, "which in aikido means no fighting, and a lot of practice in balance and position."

Unlike judo, karate or kung fu, aikido students do not advance through competitions since the use of strength and discord are deemphasized. Instead, an expert from Tokyo observes exhibitions showing how well the student has mastered a set series of techniques.

The chief feels that the years he spent learning aikido have influenced him in all aspects of his life. Although he's only used the art once in an emergency (as a shore patrolman), he called aikido a great help in keeping his good health and peaceful disposition. "I've learned to flow with the stream," he said.

Even though he has achieved excellence in aikido, Chief Parker is not smug or self-satisfied. He recalled the story of the old master who had earned the highest degree of black belt and could take on 18 opponents at once at the age of 72. "He said he still felt that he had not even scratched the surface. If that's so," the chief laughed, "I haven't even landed on it!"

Chief Parker plans to attend Sophia University in Tokyo later this year to improve his Japanese language and develop further in aikido. "I really look forward to talking easily with my Japanese friends and fellow students," he said.

Combining an American drive for being the tops in his field with Oriental patience and dedication to discipline, aikido-expert Parker is also a Western master of meeting the East and enjoying it.

—Story & photos by JOSN Tim Carney

PROFILES OF THE FLEET

Hines & Boulton

Corpsmen

Above: Hospitalman Willie Hines measures a new patient. Right: HN Kathy Boulton takes a blood sample.

"Rewarding and fulfilling," is the way Hospitalman Kathy Boulton describes her work at the Regional Medical Center at Naval Air Station, Jacksonville, Fla. Kathy, a medical technician, is assigned to the psychiatric and neurology department where she's getting experience and developing medical skills while working in the Center's emergency room.

"The Navy is teaching me a profession that I thoroughly enjoy, one that I'll be able to use the rest of my life," she says. Her pursuit of education, especially in her chosen career field, remains uppermost among Kathy's immediate goals.

Having received permission to enroll in the Emergency Medical Technician and Paramedic School, Kathy plans to enter this month. As for the future, she hasn't any plans except to be involved in medicine in some way the rest of her life.

If Hospitalman Willie Hines ever settles down to a wife and family, he won't be able to plead ignorance when it comes time to hold, feed or diaper-change a baby.

Hospitalman Hines, stationed at the Naval Regional Medical Center at Charleston, S. C., has been working for the past seven months in the pediatrics ward of the hospital, where children through the ages of 13 years receive care.

His duties range from the not-so-glamorous-but-very-necessary diaper-changing to checking vital life signs of the infants and children assigned to him, to assisting the doctor in the treatment room when it is necessary, to putting a fresh bandage on a wound.

When a child enters the hospital, he is very likely in pain, lacking appetite, unaccustomed to hospital personnel and routine, and justifiably confused. Consequently, Hines feels one of his most important jobs while working with the children is helping them make a smooth transition from home to hospital. "Kids are in a strange land here," he says. "I have to try to make them feel at home."

Willie talks as he feeds his young patient and takes its temperature; he winds a music box and places it in the crib next to a wide-awake child. He goes out of his way to retrieve a stuffed animal from the floor and return it to its owner.

The world of children is not an entirely new one to Hines since he often cared for his four younger brothers and sisters before he came into the service.

Upon graduating from Hayes High School in Birmingham, Ala., in 1973, Willie went to college for a time and then decided to enlist in the Navy to have the educational benefits of the G. I. Bill when his four years end.

During his off-duty hours, Willie enjoys reading, with subjects ranging from mystery to medical books, and sports, particularly basketball.

Willie is now hoping to receive further medical training at Oakland, Calif., to become a lab assistant. He admits to having a fascination for learning about diseases of the blood and he wants to learn all he can about the subject.

—PH3 Patti Phillips, USN

Cdr Robinson
White House Fellow

Secretary of Housing and Urban Development Carla Hill discusses an assignment with White House Fellow Commander George Robinson.

Since 1964, the White House Fellows program has provided gifted and highly motivated young Americans with firsthand experience in national government.

During their one-year assignments as assistants to cabinet officers or White House staff members, Fellows become involved with the leadership in America.

Fifteen Fellows were selected in 1974 from more than 1300 applicants. Commander George S. Robinson was one of them—only the third Navy man to be chosen since the program began.

It's difficult to generalize about the assignments given to White House Fellows, but all demand flexibility, exacting work and the capacity to learn quickly. Rather than fit the Fellows to their pre-Fellowship specialties, the program aims to "tap all their resources."

"Even though my job does not really correspond with being a Civil Engineer Corps officer in the Navy," Robinson said, "I now have a much better understanding of high level leadership and management. It has been both broadening and maturing."

In just seven months, Robinson had discussed national housing problems at all levels of society ranging from Indian chiefs to the Secretary of Housing and Urban Development (HUD). He also had an opportunity to talk with President Ford, cabinet members and others.

"I've been totally involved with the program since my first days as special assistant to the secretary of HUD," Robinson said. After just four days on the job, Robinson was tasked with organizing presummit conferences on housing and construction costs, as a prelude to the President's conferences on inflation last October.

During the past 11 years, White House Fellows have dealt with many problems, walking the streets in the big city ghettoes, sharing the 0800 to 2400 schedule with D.C. patrolmen, talking with heroin addicts enrolled in the methadone maintenance programs, and searching for answers to the poverty of Appalachia.

Robinson toured Indian huts near Phoenix, Ariz., last fall seeking solutions to housing problems. His report was part of a briefing for former HUD Secretary James T. Lynn, before a conference with more than 700 Indian leaders.

In addition to their regular duties, Robinson and other White House Fellows meet three times weekly, in off-the-record discussions with prominent government officials, business and world leaders and members of the press.

For further exposure to national and to international affairs, the Fellows travel to other countries; the 1974/75 Fellows selectees made a trip to Canada and recently visited Alaska where they talked with government and business leaders, and toured Eskimo camps.

If you would like to enjoy experiences similar to those of CDR Robinson, you may request an official application form from the President's Commission on White House Fellows, 1900 E Street, N. W., Washington, D. C. 20415. The application period opens 1 August and continues through 1 Dec 1975. Selection of Fellows is made the following May for a Fellowship of one year beginning September 1976. Military applicants should be at least 29 years old but not older than 36 by 1 Sep 1976. Additional information concerning this prestigious program has been promulgated in BuPersNote 1560 of 16 Jul 1975.

—Story & photos by JO3 Kerri Childress

PROFILES
OF THE FLEET

Brass Pounders

You have to go a lot south and some east in Virginia to the Dismal Swamp area before you find the quiet little town of Northwest. They were pounding brass down there not so long ago—lots of it.

There used to be a lot more brass-pounding than there is now. It was out there on the high seas with darkened skies and thunderous winds that old "sparks" came into his own. It is no wonder that calls like NSS and NAA were blazened into the logbooks and hearts of wireless men of an age upon which the sun now sets. Manual Morse was the language of communications back then, and you knew a man by his sending "fist"—the swing of his key.

All of these memories returned when some of the modern-day CW men gathered at Naval Communications Station NAM to participate in this year's Armed Forces Day Communications Exercise.

Each year, thousands of United States radio amateurs using their own FCC-approved frequencies and call signs exchange signal reports with several Department of Defense radio stations as part of the Armed Forces Day Exercise. These stations are WAR and AIR in the Washington, D. C., area, and NAM and NPG, operating in the Norfolk, Va., and San Francisco, Calif. This annual event has been going on for 26 years, but some of the earlier naval communications with radio amateurs date back to 1925 when U. S. "ham" operators assisted the Navy in the operation of a short-wave station aboard USS *Seattle* (CA 11) during a cruise to

LEFT: ET1 Walt Barron, like many other hams, operated NAM on his own time "just for the fun of it." Above: Young Bobby Allen spins the dial of one of NAM's radio teletype receivers while his father, Chief Sid Allen, supervises. Facing page, right: Chief Warrant Officer Dave Hassall, organizer of the 1975 communications exercise at radio station NAM.

the South Pacific with stopovers in Australia.

The purpose of this annual exercise is twofold: First, it is used to develop and test emergency and backup communications procedures and facilities at the Armed Forces stations, to ensure that in case of natural disasters, message traffic could be passed. Second, it allows both the Armed Forces stations and amateur radio stations to verify their signal effectiveness.

For example, at the Navy's Northwest (Virginia) Receiver Site, backup amateur radio receivers were employed instead of the higher performance U. S. Navy ship-to-shore high frequency receivers. About 30 miles away, near the town of Driver, ham radio operator Lon Massie and his crew of 11 men maintained close watch over the technical performance of four of NAM's transmitters which operated almost continuously (on 3, 7, and 14 MHz frequencies) for about 12 hours. These transmitters, while being capable of generating nearly 40 kilowatts (KW) of radio frequency power, were run at one KW to simulate emergency power operation levels.

Although NAM transmitted voice single-sideband and radioteletype signals, it was the CW (Morse) positions which favored the attention of guest amateur radio operators such as Clay Hanson of Alexandria, Va., known as W4NPG to his ham radio friends around the world. Another radio "ham" drove down from Ohio. He is Lou Amstutz (W8YNL) who was overheard saying, "There are two annual events for which my XYL (wife) issues an unquestioned kitchen pass—the Armed Forces Day Exercise and the Dayton Hamvention!"

Visitors to NAM, many of whom are professionally involved in communications, were most favorably impressed by the special operating facilities designed and installed for the exercise by Chief Warrant Officer Dave Hassall, USN, assisted by Mr. John Wileman and a small crew of technicians. Flawless operation of the simulated emergency equipment netted nearly 1000 contacts with amateur radio stations during the first eight hours of operation. While guest amateur radio "ham" operators manned these special consoles, normal NAM station activities proceeded without interruption.

Following the Morse Code translation of the special Armed Forces Day message to all radio amateurs at 25 words per minute, the 1975 exercise was terminated. Thus ended an unusual day of radio operations at NAM. As some tired, but happy, hams headed home, the station crew of NAM began another "normal" duty shift.

For those of who were fortunate enough to have been there, we shall long remember signing on dah dit-dit dah-dah dah. Just as an era of naval communications had been closed with the silencing of NSS, so we had written a small line on the pages of history with the debut of NAM in the Annual Armed Forces Day Communications Exercise.

Look for more of the same next year.

—Peter Hurd, LTCOL, USAF.

Profile of a ship and its crew

USS Compass Island

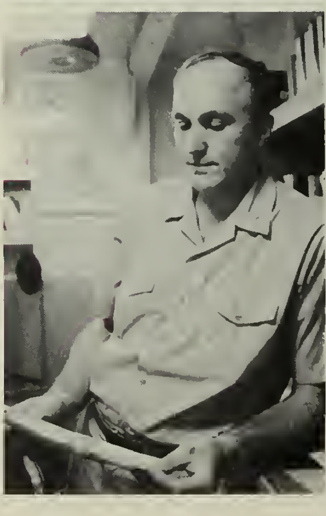
An AG? Other than Aerographer's Mate, what's an AG?

That was not an uncommon question around the Charleston Naval Base last summer. That's when USS *Compass Island* (AG 153) arrived in her new home port after 18 years operating from Brooklyn, N. Y.

The "CI" (as she's called by her crew), an experimental navigation ship, was first placed in service as a fast cargo merchant vessel. In December 1956, the Navy acquired the ship from the U. S. Maritime Administration after a decision that a fast "Mariner-class" hull would make the best test platform for precision navigation equipment being evaluated for Fleet use.

Only months after being commissioned, she was underway for tests to evaluate inertial navigation equipment for use in what was to become known as the *Polaris* program. In the 1960s, the ship played a key role in the development of *Poseidon*. Currently, she's at sea conducting navigation equipment tests for the

Below left: USS Compass Island (AG 153). Center top: CDR Jim Mace, commanding officer. Center bottom: LCDR Jim Howell, special projects department head. Right: ET1 Frank Bannon compares calibration data with ET1 Wayne Danner. Facing page left: ETN2 Randy Downs checks out equipment with aid of ET1 Wayne Danner and ETN2 Frank Moscato. Facing page top to bottom: Launching magnetometer sensor. Civilian engineers at work in ship's Data Analysis Center. ET1 Rick Drown watches ETN2 Kenny Knowles review Navigation Aids Division's test assignments for the day. ETN2 Rick Hawthorne checks out a printed circuit board for breaks.



SSPO in support of the *Trident* system.

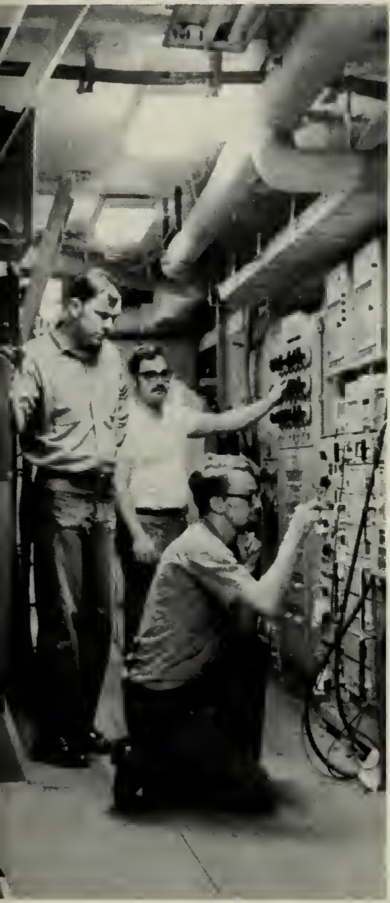
During her conversion, *Compass Island* was specially equipped with roll-stabilizer fins (when similar ships are rolling 20 degrees, in the same seaway *Compass Island* will roll only about two degrees).

The ship is 564 feet long and carries a crew of 15 officers and 225 enlisted men, many of whom are specially trained electronics technicians assigned to the ship's "Special Projects" Department. In addition to the Navy crew, *Compass Island* normally carries approximately 30 civilian engineers and technicians during at-sea periods. Normal operations consist of short but frequent deployments, usually to operating areas off the Atlantic coast.

For the men of *Compass Island*, Navy and civilian alike, deployments are periods of intensive data collection mixed with other periods when there is time in which to relax. On board, some almost-empty cargo holds have made possible a wide variety of recreational activities, including a full-court basketball gym, a weightlifting room, a band room, a library and a live ship's radio station.

A unique ship in many ways, *Compass Island* is proud of the role she has played in the development of the navigation system which is so important to our strategic missile submarine force.

—Story by LTJG James Bullock
—Photos by PH2 Robert Holzhauer

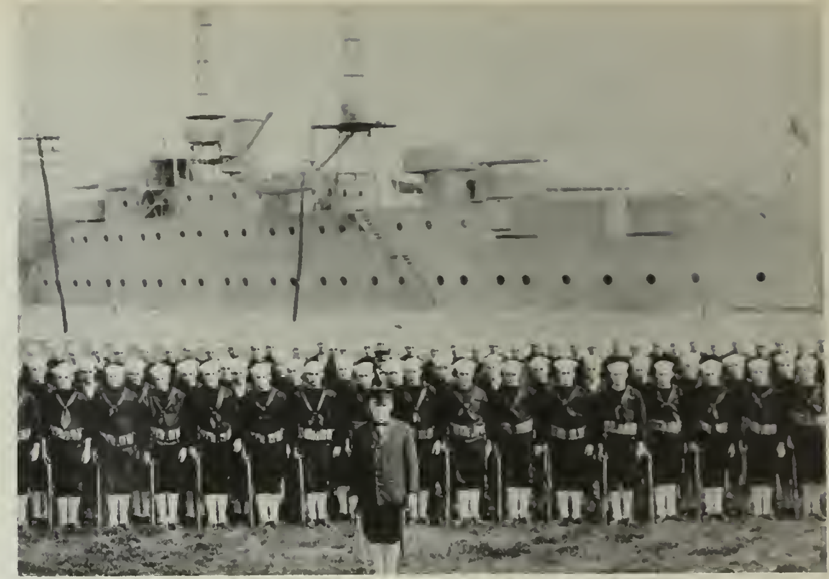


letters

Recruit Ship

SIR: I do not wish to take away any credit that is rightfully due the training aid USS *Recruit* ALL HANDS, Dec. 1974), however, I would like to keep the record straight. USS *Recruit* was not the first such mock-up, this honor belongs to a scale model battleship constructed at the Norfolk Virginia Naval Operating Base in the early 1920s.

To the best of my knowledge, this ship was called USS *Electrician* and was used to train electrician's mates as well as recruits in general. I also seem to recall that it was dismantled shortly before World War II. Perhaps some "old timers" will write and furnish more facts.—CDR. P. E. T., USNR (Ret)

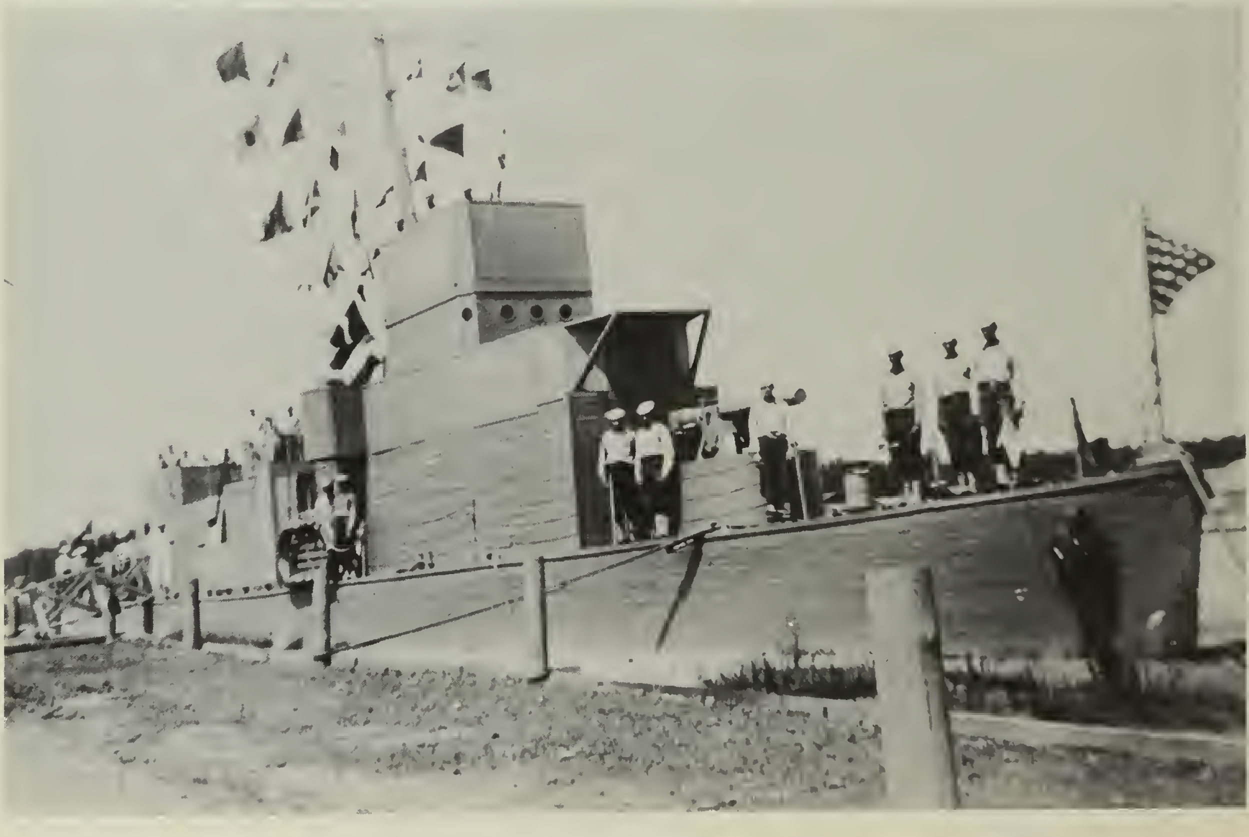


'Miss Never Sail'

SIR: I was particularly interested in the article, "25th Anniversary USS *Recruit*," which appeared in December 1974 ALL HANDS. It stated that USS *Recruit* is believed to be the first such recruit mock-up used to train sailors for shipboard duty.

In the fall and winter of 1944 at Camp Peary, Va., we constructed a scaled-down DE that was used for the very same reason as USS *Recruit* in San Diego. Our crew was composed entirely of sailors that completed 16 weeks of recruit training and basic grammar school subjects. We were fortunate in that some of these men were exceptionally good carpenters in civilian life. Within a period of a few weeks, these men completed the mock-up entirely from scrap lumber and other material, as you can see from the accompanying photos of various stages of construction. Other photos show recruits receiving their training on board the mock-up after completion. The mock-up was nicknamed "Miss Never Sail" and was still in use when I was discharged in June 1946.

Incidentally, after leaving the Navy I spent 18 years in a Reserve component of the Army with some active duty as a first sergeant, but no military branch compares with the Navy and what it has to offer. Once again, may I say I enjoy ALL HANDS Magazine very much.—V. L. Lusk, USNR.



LT Robert A. Beaty

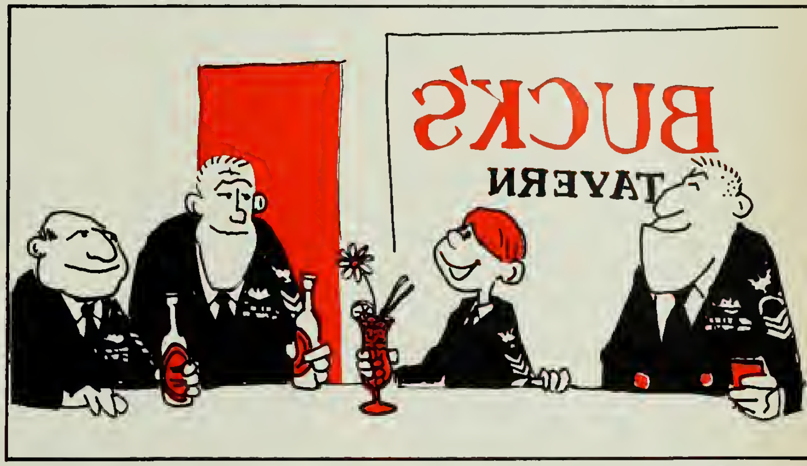
"I need 30 feet of shoreline and a gallon of propwash."

CTA2 Michael F. Walsh

THE PROBLEM WITH THE NEW UNIFORMS IS THAT YOU CAN'T TELL A CHIEF FROM THE OTHER ENLISTEES.
DON'T WORRY CHIEF, YOU CAN STILL TELL?!

"That's right! I am a nuke! But how did you guys ever guess?"

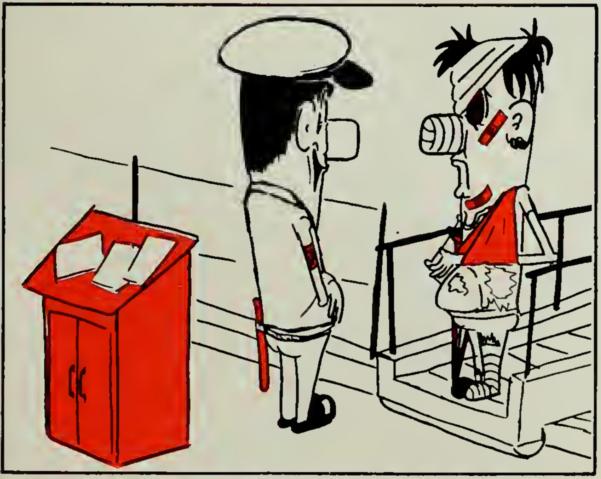
on the serious side



IC1 Jeremiah H. Pao

SK1 Mariano J. Deocampo

DK2 Alan L. Berry



"Go back and get into the uniform of the day before you try to come aboard."

"You read the menu! It clearly stated 'round steak'."

TAFFRAIL TALK

In this age when everyone is concerned with ways to save the proverbial "buck," officials at Naval Air Rework Facility (NARF) in North Island, Calif., report they have found a rather simple way to do just that. Sound fishy? You're absolutely right.

This California site is using goldfish to do much of the dirty work around the station's secret radar antennas. "They eat algae deposits in a freshwater tank we use for cooling the tubes of aircraft radar antennas," explained Gerry Boling, NARF's public affairs officer.

Started in 1962, this project was the brainchild of employee Cliff Carter, now retired. He bought several little goldfish that anyone can get in a five-and-dime store. The fish not only did the cleaning, but multiplied over the years and increased in size. Some are now more than a foot long and at least one weighs about four pounds.

Growth of that magnitude is no fish story, according to Harold McClelland, chairman of the Goldfish Society of America. "Given plenty of space, a super-oxygenated atmosphere and a good, nutritious diet, the ordinary goldfish certainly has a potential for that kind of growth," McClelland said. He noted he experiments with goldfish growth projects at his Mission Hills residence.

"The idea of using goldfish to clean algae is not really new," McClelland added. "An electric generating plant in Boone, Iowa, used carp—they are related to goldfish—in the 1920s to keep freshwater tanks clean. Carp and goldfish are great scavengers," he concluded.

* * *

All Hands was saddened to learn that Chief Torpedoman's Mate Harry Morris, a veteran of the Great White Fleet of 1907 and an enlisted man with one of the longest active duty careers (55 years), passed away on the West Coast on 29 June at the age of 87.

The chief, who retired on 1 Feb 1958, served his last tour in San Diego as liaison between the shore patrol and the local police. Of that duty he said, "It's sort of my life's work to attempt to keep Navymen out of all sorts of trouble and this job gives me the chance."

Chief Morris began his service as a 14-year-old Apprentice Boy in Newport, R. I. Entitled to wear the Figure of Eight knot denoting a former Apprentice Boy, he served in a total of 41 ships. His first was the old *Alliance* of Revolutionary War fame—then on the Navy rolls along with *Constitution* and *Constellation*.

A veteran diver, he was ordered to Pearl Harbor shortly after the 1941 attack which signaled America's entry into World War II, to help raise the battleships USS *West Virginia* (BB 48) and *California* (BB 44).

Chief Morris last served as chairman of the Great White Fleet Association, calling together the members for annual reunions. The most recent he called the "last muster." Of the 14,000 who took part in the famous world cruise only about 80 survive.

In one of his letters to All Hands he said, "When I look back through the years I wish we had the chances and opportunities of today, but it is still the same Navy and the same spirit and loyalty and tradition."

The All Hands Staff

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

ORIGINAL ARTICLES and information of general interest may be forwarded addressed to the Editor, ALL HANDS, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, 2221 Jefferson Davis Highway, Washington, D. C. 20360.

DISTRIBUTION: ALL HANDS is distributed on the basis of one copy for approximately six naval officers and enlisted personnel on active duty. The Navy Internal Relations Activity (NIRA) invites requests for additional copies as necessary to provide adequate distribution on this basis. Note that distribution is based on the authorized number of members attached. NIRA should be kept informed of changes in the number of copies required and if the full number is not received regularly.

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Winking and exhibiting that smugness of one having superior knowledge that "GO (ing) Navy" is the thing to do is Bryan Jacobs, son of JO1 Joel E. Jacobs. Father took the picture, of course.

Go NAVY

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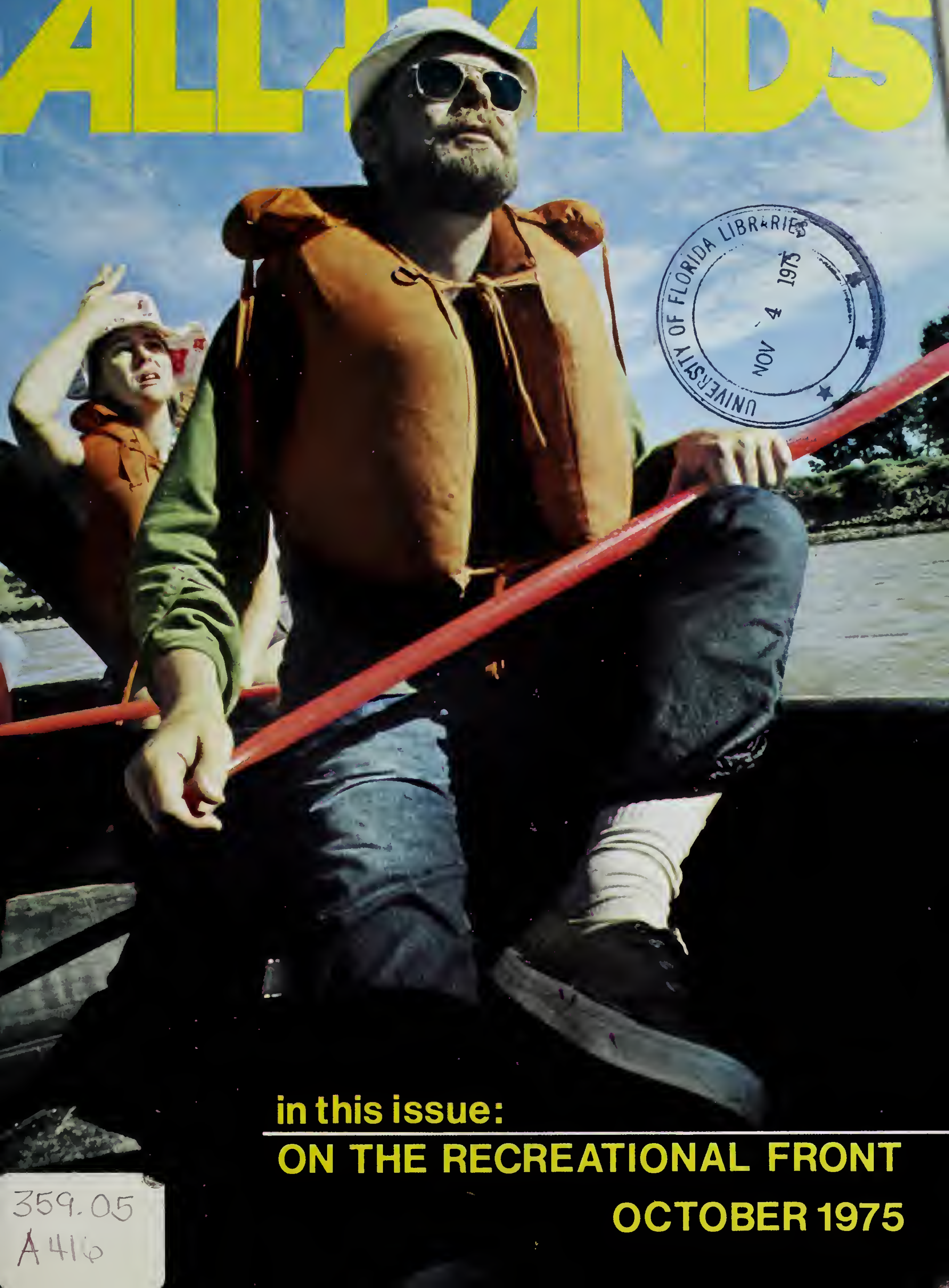

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MAGAZINE OF THE U. S. NAVY— 53rd YEAR OF PUBLICATION
OCTOBER 1975 NUMBER 705

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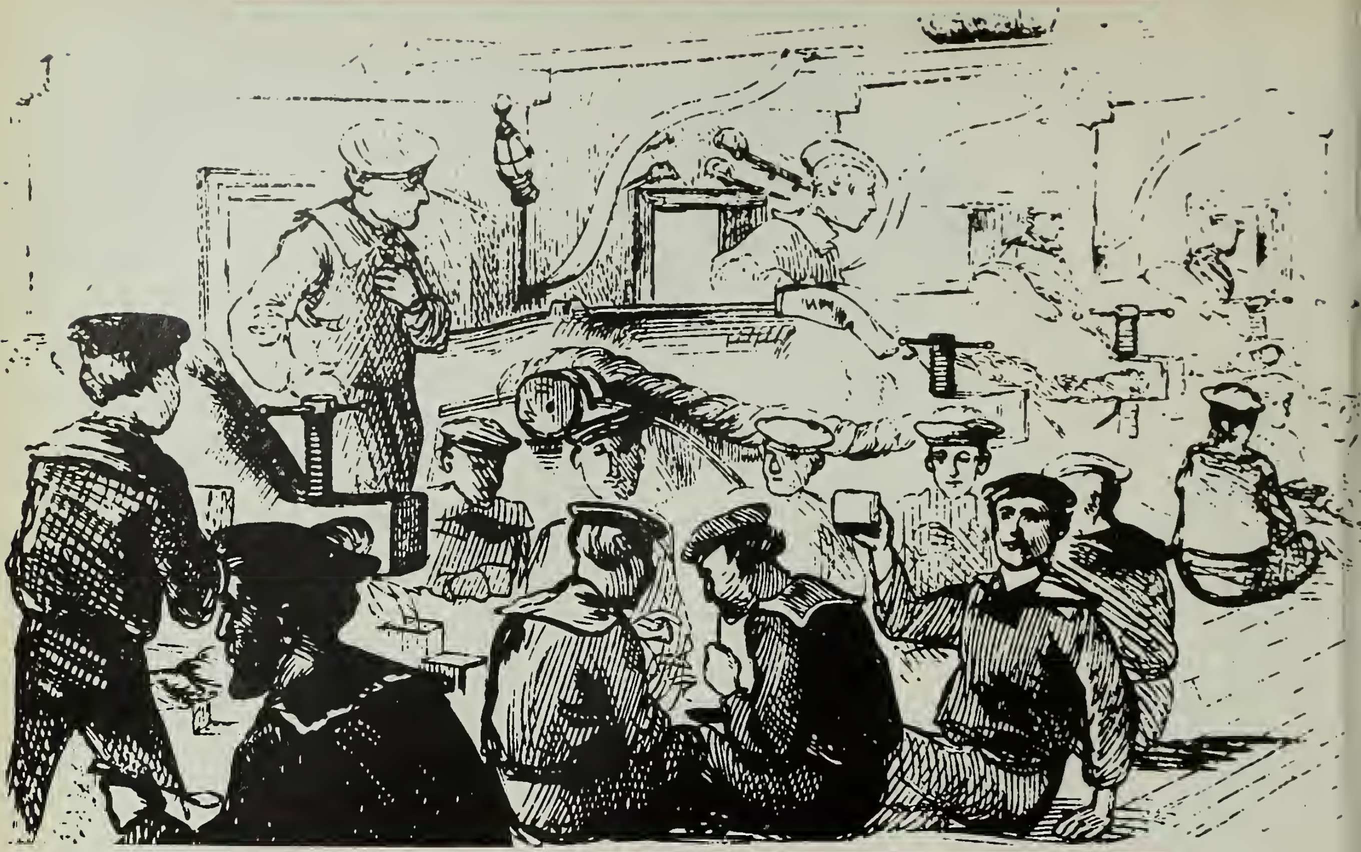
LEFT: A familiar sight for fleet-going sailors is refueling at sea. USS Cone (DD 866) prepares to come along side for replenishment. Photo by PH1 Milt Putnam.

FRONT COVER: Navymen shoot rapids. For more on what Navy people are doing in their off-duty hours, see articles starting on page 6.

BACK COVER: Crew of USS Nimitz (CVAN 68) gather to hear CNO ADM James L. Holloway III during filming of SITREP 11 aboard Nimitz. Photo by PH2 Terry C. Mitchell.



From Jerky to Turkey

A History of Navy Chow

Breathes there a tar with palate so dead,
Who to his shipmates hath not said—
"This chow is awful!"?

More often than not, the complaint is voiced *after* a second helping of roast beef, mashed potatoes, green peas, chef's salad and apple pie a la mode.

In today's Navy, the occasions when such complaints have some foundation are far outweighed by the many other meals consumed, but in the sea service of 200 years ago if a sailor complained about the food, he would probably have had good reason. Sea duty in those days meant sleeping in hammocks, steering by the stars and eating food sometimes moldy, sometimes rancid, sometimes overage, sometimes all three.

Still ready to complain about last night's chow? Read on.

Uncle Sam's early Navy was a career for strong men and it needed strong men with hearty appetites to relish the diet common to life at sea in the days of sail.

Food issued to the American Revolutionary sailor might consist of ship's biscuit that was as hard as rocks and often inhabited by weevils, a portion of salt pork, some dried peas and water.

By the early 19th century a permanent federal Navy had been established, but the chow had not yet improved substantially. A ration law outlining the amount, kind and the days on which certain foods were to be served had been approved by Congress. Owing to a lack of preservatives other than salt and brine, and a paucity of funds, only a limited variety of foods was authorized. Those foods were generally bland and somewhat unpalatable.

A seaman's typical daily ration consisted of one pound of hard bread, one and one-half pounds of salt pork or beef, a half-pound of dried beans or rice and a quart of beer or a half-pint of rum. On Fridays he received salt fish instead of beef and Wednesdays were meatless days with two ounces of cheese as a substitute. Vegetables deteriorated quickly at sea, but when they were available, the ration included a few potatoes or turnips on Tuesdays.

For preparing and eating chow, the crew was divided into groups of 20 men, each called "berth deck messes." Grouping was determined according to duties or living quarters, a custom inherited from the British Navy.

Each mess elected its own cook—culinary expertise seldom determined the outcome of elections. The job required no particular cooking skills but did entail washing dishes after each meal. Dirty dishes were dunked in a bucket of cold, greasy seawater and left on the open deck to air-dry.

In spite of the limited variety of food and the poor preparation facilities—usually a sandbox holding hot coals and an iron kettle—the old-time cooks were quite skillful in creating edible meals. One favorite treat at sea, usually served on Saturdays, was called "cracker hash." It was made from broken-up hard bread, any vegetables that could be cumshawed and salt pork. Another favorite, "plum duff," consisted of flour, molasses and raisins (raisins helped hide the weevils in old flour)—ingredients seldom available.

When the first ration bill passed in 1794, Congress didn't foresee the establishment of a permanent Navy. They had authorized the building of six ships to combat Algerian pirates attacking American merchant ships off North Africa. Congress' intention was to disband the Navy when merchant ships were again free to trade safely. Since the Navy then was thought to be a one-time, short-term venture, not much thought was given to the wholesomeness of the sailor's diet. Cost was the principal consideration. Consequently, 28 cents per day was authorized for the purchase of food for each seaman.

By 1801, the pirates had been subdued, but the sea service was not demobilized; instead, it was reduced to a peacetime establishment. A new ration was established which substantially reduced the allowance of bread and meat. Friday, for example, became a day of short rations, called Banyan Day after the Hindu caste which abstains from meat. Reduced rations didn't meet with favor among sailors but it was not until 1818 that a new ration was authorized.

That ration was similar to the previous one in that it lacked variety and continued to specify days on which certain foods could be served. In 1842, the idea of a fixed allowance for each day was discarded and a more flexible allotment of specified items and substitutes was authorized. The rum and beer rations were taken away from commissioned officers and midshipmen, but continued for the crew; those under age received a few pennies additional in their pay, since no sailor under 21 years old legally could be issued spirits.

Opposite page: A berth deck mess in an early Navy ship. Right: With the introduction of the general messing system, the whole crew became involved in the preparation of meals and the clean-up detail following them.

On 1 Sep 1862 the spirit ration was discontinued for all and in its place the men received a stipend equal to five cents per day. This legislation prompted the old Navy refrain, "They raised our pay—five cents a day—and took away—our grog forever."

The Civil War brought other changes to the Navy such as steel ships and slightly better living conditions, yet the ration remained unchanged until 1906. Between the Spanish-American War and World War I there was a demand for a "steaming watch ration" for enlisted men of the engineering division and dynamo forces standing night watches. As a result, a special ration was provided—forerunner of midrats—for all night watchstanders.

Other major changes included the abolition of the berth-messing arrangement and the introduction of the general messing system. The feeding of the entire crew in a common mess was introduced and this change led to better food and improved morale along with distinctly more healthful conditions at mealtime.

Combining ration funds made it possible to vary the Navy diet, basically unchanged since the 18th century. For the first time, veal, lamb, sausage and fresh vegetables were authorized aboard ship.

With centralized cooking and serving came joint-effort cleaning of the messing areas. Previously acceptable grease film or food particles on utensils and dishes became unacceptable due to tighter cleanliness regulations.

The first standard Navy cookbook was written by a Navy paymaster (forerunner of the supply officer) and replaced an old guide used by all services. The old cookbook contained such advice as: "The presence of wormholes in coffee should not occasion its rejection . . . since they generally indicate age, weigh nothing and disappear when the coffee is ground." Due to early 20th century discoveries of better ways to preserve food and modern means to freeze it, food quality aboard ship improved greatly. Between World War I and II, there was a strong demand by sailors, as by the public in general, for a diet consisting of more vegetables, fruits and milk. As rapidly as technology and budget permitted, these foods became commonplace aboard ship.

In 1942 additional sources of vitamins were added to the Navy ration without any revision of the ration bill. Vegetables and fruit juices—fresh, canned and concentrated—flour enriched with vitamin B1, niacin and iron, and enriched yeast were added to the daily menu. Combat rations, survival rations and other special type subsistence designed to feed fighting men under extreme conditions also were introduced during this period. As the war became a long-range proposition both in terms of distance and duration, the Navy strove to provide nourishing foods to keep sailors well fed and, at the same time, eliminate the need for frequent underway replenishments.

Between 1945 and 1960, technological advances in all areas of naval operations were tremendous. Sophisticated electronic equipment and highly complicated weapons systems demanding constant alertness and longer spans of attention prompted nutritionists to devise better diets and test recipes for all foods served in Navy dining facilities. The foods served had to sustain personnel under strenuous and often tedious operational environments.

The Navy turned its attention to developments in food preparation, handling and processing as never before. Many new types of food—processed in ways never before tried—helped alleviate crowded storage conditions and greater emphasis was placed on developing better ration-dense foods. These staples consisted of concentrated, dehydrated, compressed, precooked and frozen foods. All bones, pits, peelings and trimmings are pruned before storage aboard so that only edible portions remain.

Galleys and sculleries were modernized. In the scullery, mechanical dishwashers, sterilizers and other sanitation equipment replaced the old "dunk and dry" system forever.

The Navy Food Service Systems Office, which falls under the Naval Supply Systems Command in today's Navy hierarchy, experimented with revolutionary ideas for food preparation and preservation. Military service research in this area led to development of space age freeze-dried foods for consumption by shipboard diners as well as astronauts.

From 1960 to the present, the Navy has continued its efforts into better ways to produce, package, store and prepare food served in its dining facilities. The Armed Forces Recipe Service (a joint service recipe supplier) now provides the sea service with ideas for more than 1300 recipes guaranteed to please the palate of any salt. In addition to food research, the services recognized the correlation between good groceries eaten in pleasant surroundings and increased job efficiency. Consequently, they are constantly looking for ways to improve the atmosphere of the dining area.

The drab-colored, austere dining areas of the pre-

Vietnam era have disappeared. Today one usually dines in an area that has piped-in background music, carpets, murals, paneled bulkheads, and a touch of home—tablecloths. In many facilities, civilian mess attendants clear away dishes, further enhancing a restaurant-like atmosphere.

Food choices have been expanded to cater to contemporary lifestyles. Many shore facilities have added speed-lines for those preferring short-order items to standard meals. Aboard ship, cookouts are often held on the fantail. These usually feature baked beans, barbecued chicken or hot dogs and hamburgers—all served in a relaxing atmosphere.

Other foods seldom seen in the galleys of the "Old Navy," but reflecting the younger generation's tastes, are appearing more frequently—fish and chips, chicken in a basket, pizza, etc. Many sailors are introduced to expertly prepared ethnic foods; on special nights the evening chow features foods of minority groups such as tacos on Mexican Night, lasagna on Italian Night or chitterlings on Soul Night. On these occasions the dining facility is often decorated in an appropriate motif.

No longer does chow go down at the regularly appointed time on weekends or holidays. Today most bases and ships serve brunch from early morning to lunchtime. Still the early birds can get their ham and eggs and a wholesome lunch as on other days.

Navy food has come a long way since the days of cracker hash and salt pork; the Navy is striving to be the best feeder in the volunteer force and the emphasis is on habitability. Ideas for improvements are welcomed and most messes have installed suggestion boxes to solicit constructive comments. Today's modern ideas about food service are due in large part to input from the fleet.

To guarantee excellence in food preparation and continuous training of food service personnel, the Navy sends five Food Management Teams to various commands throughout the year. These teams, which made 317 regular visits, held 13 seminars and conducted 300 special assistance visits last fiscal year, provide on-the-job training right in the dining facility. They teach food preparation and service techniques besides menu preparation, stock control and related topics. Training is provided by the show-and-tell method, as teams roll up their sleeves and work with the regular food service personnel.

Effectiveness of the teams can only be measured by the changes directly attributable to their efforts. The most obvious change is the increasingly stiff competition for the Ney Memorial Awards which are presented each year for food service excellence. However, the real winners are the Navy men and women who are enjoying better tasting and more nutritious meals with each passing year.

Chow has progressed from hard tack and beef jerky to hot rolls and sirloin steak, yet this is not the end of improvements. Plans and improvements for the future continue to be made. Some being planned are:

- Basic allowance for subsistence a la carte food service program, in which all enlisted personnel would be given a basic allowance for subsistence in lieu of rations in kind. Members could purchase the items they desire on a cash basis. The concept is currently being tested by the Air Force and DoD has requested that each military service conduct a similar test.
- Additional beverage-service capability for carbonated drinks, instant iced tea and milkshakes.
- Ice cream bars and dessert bars.
- Radiant electric conveyor broilers and hot dog roll-a-grills for short-order capability.
- Automatic donut fryers and glazers.
- Improved dining tables and chairs, readily convertible for movie viewing or recreation room space, are being tested.
- Individual plate service for enlisted personnel.

These are but a few of the innovations for the future; they serve to show that the Navy's food service program is alive and moving forward. No matter how extensive the changes, the basic concept will still prevail: good food when properly prepared and served is one of the Navy's best morale and health builders. The Navy Food Service Systems Office adheres to this creed. Eventually its effects will extend to generations of future Navy people.

—By JO2 Dan Wheeler

Left and right: As it is today—Navy chow is meant to be pleasing to the eye and the palate as well.

Pastimes Unlimited

A look at a few sailors' hobbies

In days of sail, seafarers had little time for hobbies and recreational activities, yet they found an occasional hour or two in which to tie decorative knots from small stuff or carve whale ivory into scrimshaw.

The once-grueling life of seamen has changed considerably in 200 years. Navymen, however, have changed surprisingly little in at least one respect—they still spend their free time indulging in hobbies, avocations and recreational pursuits.

What follows is a roundup of hobbies and recreational activities pursued by people in the modern Navy. The nautical arts of scrimshaw and knot-tying survive, but have been augmented by hundreds of landlubber hobbies—some as commonplace as stamp collecting and others unique, like building a model F-14. Judging from their pastimes, Navy peoples' imaginations are every bit as fertile as those of sea dogs of old.

- When Boatswain's Mate 1st Class Jim Kirpes of Navy Recruiting District Seattle advises prospective Navymen that "now is the time to join," they can hardly deny that he knows what the time is—he keeps his accumulation of 16 collectors' clocks, wound and ticking, right in his office.

A native of Washington, Kirpes began collecting clocks of various shapes and origins more than two years ago and today is the proud owner of an 1850s vintage Regulator. Although clocks like the Regulator can be very valuable, that's not the reason he started his collection. "I think it's not so much the timepieces as the sheer joy of finding a unique clock at a good price," asserted the boatswain's mate.

Kirpes started taking an active interest in clocks at the age of five. He disassembled them! "Even though I never could get them back together," he explained, "the experience whetted a curiosity which I am only now fulfilling through my collection."

A veteran of 14 years of naval service and a recent selectee for chief petty officer, the recruiter continues to search for rare or interesting timepieces. Sometimes people mention in general conversation that they know the whereabouts of an old clock, and off goes Kirpes, rummaging through dusty and long-forgotten boxes. Often the newly found "treasures" are timeless—that is, they don't work—but that doesn't bother Kirpes. As he puts it, "I've got plenty of time!"

- The art of scrimshaw, engraving delicate designs on whale ivory, was developed and perfected by 18th century whalermen. Handed down through generations of seafarers, it was commonplace among New England whaling men during the 19th century and has hardly lost its popularity through the years.

One of today's artisans is alive, well and practicing the ancient skill in the modern Navy. He is Lieutenant Commander Russ St. Jean, chief staff officer for Commander Destroyer Squadron Nine, Naval Surface Force, U. S. Pacific Fleet.

A native New Englander, St. Jean has always admired scrimshaw yet didn't try it himself until 1971.

Then, like seamen of old, he used scrimshaw to fill empty hours at sea.

His early work was etched in sperm whale teeth purchased in New England before whales were declared an endangered species. Today, St. Jean practices the art on elephant tusk ivory.

In its natural state both whale and elephant ivory is rough-surfaced. Before a design can be etched, the ivory must be sanded with pumice and then buffed to a flawless sheen. Not even hairline scratches should remain lest they be filled with ink and spoil the piece.

Next, St. Jean coats the surface with India Ink. (Whalers used soot or lamp black.) Then, with the proposed design etched firmly in his mind, he engraves the painted ivory with sailmakers' and common darning needles and an artist's knife. When the engraving is completed, the entire piece is again covered with ink and allowed to dry.

Next, the excess ink must be removed by rubbing the ivory with paper. "I use brown paper grocery bags," said St. Jean. "They have enough abrasive quality to remove the darkener and not scratch the ivory." Upon completion of the rubbing, only the ink in the engraved lines remains and the scrimshander's work is complete.

"In order to be called true scrimshaw," asserted St. Jean, "an artifact must be crafted primarily by whalermen, sailors or others associated with nautical pursuits. The piece should have a nautical association as it relates to motif or materials."

In last June's Eleventh Naval District Arts Fair, St. Jean won a first-place ribbon for his ivory sculpture "Dancing Dolphins" and a third place award for a delicate scrimshaw pendant depicting a clipper ship.

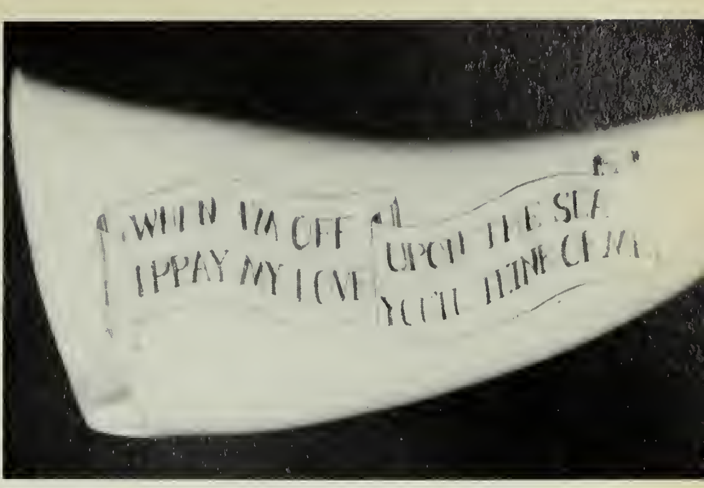
Of the hundreds he has created, the scrimshander's favorites are a color portrait of John Paul Jones, and an American Eagle sketch. Both were etched on whale teeth.

The days of the great American whaling fleets are gone forever, yet a reminder of that romantic era is being passed on to yet another generation through at least one sailor's mastery of scrimshaw.

• "A thing of beauty is a joy forever," quoted Lieutenant Commander Tony R. DeMarco, when he was recently officer in charge of the Pacific Fleet Public Affairs Detachment at Subic Bay, R. P. (he's now stationed in Norfolk, Va.). He wasn't referring to a Grecian urn though, he was speaking of a golden crowie, one of his more than 2000 seashells.

LCDR DeMarco began collecting seashells about four years ago while stationed in Guam and has been "strung out" on the hobby ever since. Now that his collection numbers in the thousands, he does most of his collecting by trading with shell hobbyists in other areas of the world.

"I correspond with collectors in Australia and send them Philippine-found specimens in return for Australian shells of comparable value," explained the enthusiast.



Although most of DeMarco's shells have retail values ranging from a mere three cents to about $500, he still maintains that one of the world's most beautiful shells is the common "textile" worth about a dollar.

"There's a shell called 'gloris maris' valued at around $1200," he said, "but I personally think the textile is the prettier. A lot of experts wouldn't agree. Still, I would rather have the biggest textile regardless of value."

Some shell collectors are also avid scuba and skin divers, but not DeMarco. He doesn't like to dive or snorkel because, as he puts it, "There are sea creatures other than seashells in the ocean and I don't want to put this Italian into the water to tempt them!"

When he left the Philippines he hoped to be stationed near some extensive shell collection area like those at

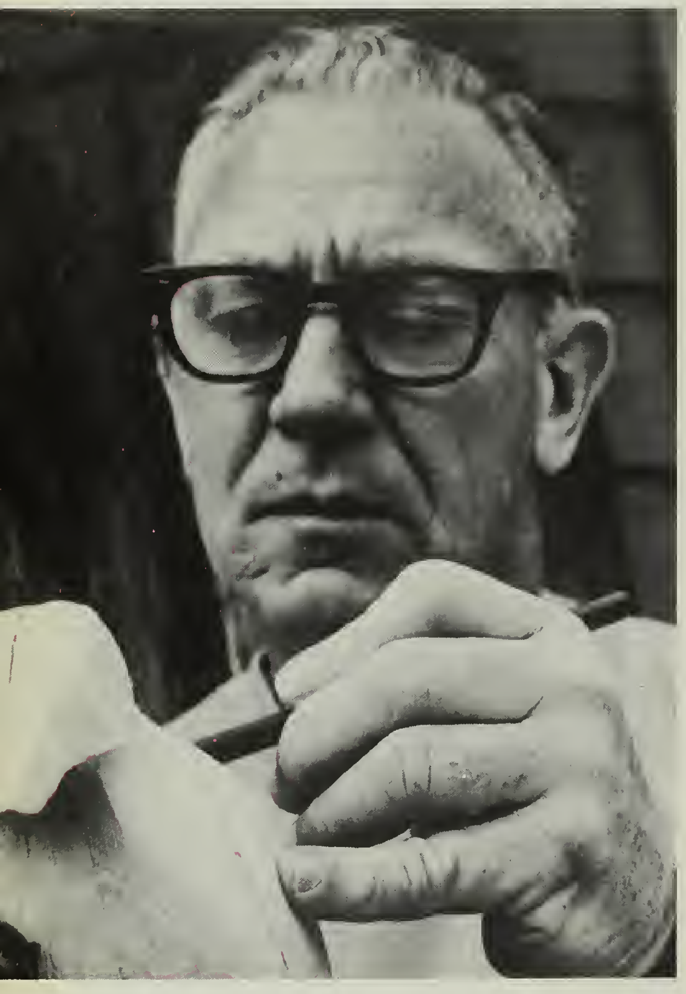
Facing page: Holding two banjo clocks which were popular during 20s and 30s, BM1 Kirpes is surrounded by part of his timepiece collection. Above: Example of scrimshaw. Right: LCDR DeMarco examines part of shell collection.

the Academy of Natural Science in Philadelphia or the Delaware Museum of Natural History. It looks now as though he got his wish with duty in Norfolk.

- You've heard of the "Bird Man of Alcatraz?" Meet Captain Charles Burbage, USN (Ret)—he's the Bird Man of Memphis.

Burbage has carved over 5000 wooden birds since he started learning his avocation at age 12. "I lived on the Eastern Shore of Maryland at the time," recalled Burbage, "and I needed some decoys for duck hunting. The only way I could get them was to make my own."

The former commanding officer of Naval Technical Training Center, Memphis, in Millington, Tenn., learned how to make decoys by watching nationally renowned decoy makers at Chincoteague, Va. Observing their methods, Burbage learned how to "hack out" his own string of decoys and gained knowledge of bird identification, coloration and behavior.



Above: Retired Navy CAPT Burbage carefully prepares wood, carved roughly into shape of seagull, for further treatment. Right: LCDR Johnson built his model from actual F-14 drawings. Facing page: FN Holmes, partially made up as Twig the Clown, holds some of the balloons he uses in his act.

When he came into the Navy in 1935, he didn't have much time to devote to carving so he left many of his prized birds at his home on the Eastern Shore. There they remained until a storm ravaged the island in March 1961.

"I was in the Med at the time as skipper of USS *Canisteo*," he said. "My neighbor said that he had watched a long line of my ducks float out to sea. When I returned, I found I had lost 975 of them."

With an estimated 300 people still actively carving decoys by hand, it has become a dying art form. Burbage, however, continues to help perpetuate the craft begun hundreds of years ago by the Paiute Indians. A self-described "rough decoy maker," he sells some of his carvings through a Memphis gift shop and contributes many to charitable and civic organizations.

- It's likely that Lieutenant Commander John Johnson, stationed with VF-32 at NAS Oceana, Va., is the only man in the country who has built a remote-controlled model airplane exactly resembling the F-14 *Tomcat*.

Fortunate enough to obtain a set of F-14 drawings from the jet's designers, Johnson began building his model using thin layers of balsa and plywood. He purchased the largest model airplane engine he could find, one-and-one-half-horsepower, and after a year's work the F-14 in miniature was completed.

The model is on a one-tenth scale and has an 82-inch wing span, retractable wings, and a radio transmitter

which activates a mechanism within the model to vary the wing sweep angle. The aircraft also has stabilators and retractable landing gear. As a finishing touch, Johnson painted the model exactly like the real thing.

Although Johnson's F-14 has yet to lift its wheels off the ground, he feels certain the aircraft is aerodynamically sound and will fly. "I just hope it doesn't go supersonic," was his only comment.

- Some Seventh Fleet sailors stationed in Japan try to break through the cultural barrier with a tour guide book in one hand and a Japanese phrase book in the other. "Not necessary," says one Midway sailor. "All that is needed is a red rubber nose and greasepaint."

Fireman Richard B. Holmes, a carpenter aboard USS *Midway*, is an amateur clown. Whenever the carrier is in port, Holmes slips into one of his 13 clown costumes to become "Twig," the laughing, fun-filled friend of boys and girls on and off base.

With his white, baggy outfit, multicolored knee socks and oversized shoes, the clown delights children with jokes and magic. In his practiced hands, toy balloons are instantly twisted and bent into colorful animals.

At 32, the stocky carrier sailor appears a little old to be wearing fireman stripes, but his two hitches in the Navy are separated by an 11-year-gap. When first discharged in 1964, he returned to Minneapolis where he joined a group of businessmen who were amateur clowns.

"I spent three years learning how to be a clown," Holmes said. "They taught me the techniques and I came up with the name. 'Twig' is a name kids called me when I was young."

Although he has only been aboard *Midway* a few months, he has introduced "Twig" to many audiences in Japan and hopes to do so in other Far Eastern ports. In July, Holmes provided amusement for children at the Yokosuka Naval Base's Summer Fun Program and also added laughter and color to the local Fourth of July celebration.

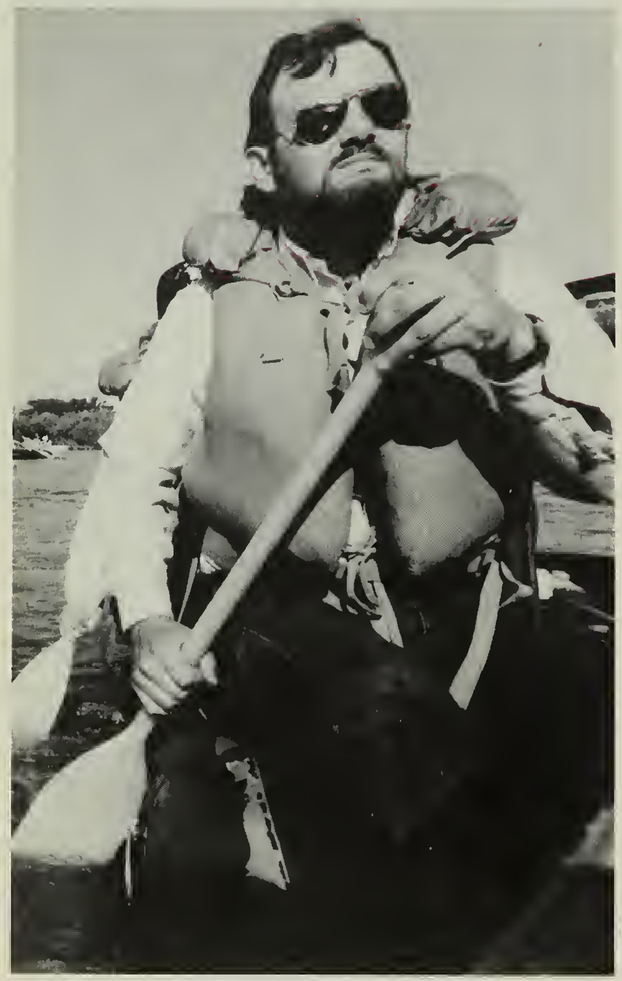
"I hope to become more involved in the Japanese community around the base," Holmes said. "Kids everywhere, every language and every age enjoy clowns."

What about the old saying that clowns are basically unhappy people? Not Twig. "There's no laughing on the outside and crying on the inside for me," said Holmes.

However, there is one thing that both upsets and perplexes him—how to fit 13 clown costumes and size 26 shoes into his shipboard locker!

(Story ideas were supplied by Mariana Preston; PHC Don Hays; PHC Wade A. Davis; PH1 J. A. Davidson; JO2 James L. Jones. Photos by JO2 James L. Jones; PH3 Frank Gavinski; PH1 J. A. Davidson; PHC Wade Davis; PHC Don Hays; LCDR Gareth D. Quale; PH1 E. George Norris.)

Yellowstone River Rats



Ever tried a Yellowstone Float?

Take 126 miles of churning river, 300 rafts, hundreds of participants and a generous topping of sunshine and mix thoroughly. The result is hard to swallow, but very exciting.

The three-day trek down the Yellowstone River has attracted participants from all over the world for the past 12 years. Called the "Yellowstone Float," it's sponsored by five cities situated on the Montana river and the race is run from Livingston to Billings. For the last four years, Navy recruiters in Montana have joined in the fun.

"Initially, it sounded interesting but nothing really special," recalled Joe Ouztes of Navy Recruiting Station Billings. "However, it turned out to be the most fantastic sport in which I've ever participated."

This year the recruiters had four rafts in the race. Two vessels were manned by recruiters, one by Air Force personnel and one by Naval Reservists. In the past, recruiters rented their rafts, but now they get 16-man rafts from the Navy.

In addition to providing sleeping areas and food kitchens for the contestants, each of the five sponsoring cities awarded trophies for unique achievements.

Top: Participants in the Yellowstone Float trip maneuver through rough water. Left: LT Ed Hall pilots one of the recruiters' 16-man rafts. Right top: Beautiful Montana scenery forms the backdrop for these floaters a few miles outside Columbus, Mont. Right bottom: A British team captain "roil-tacks" his Skipjack in light air.

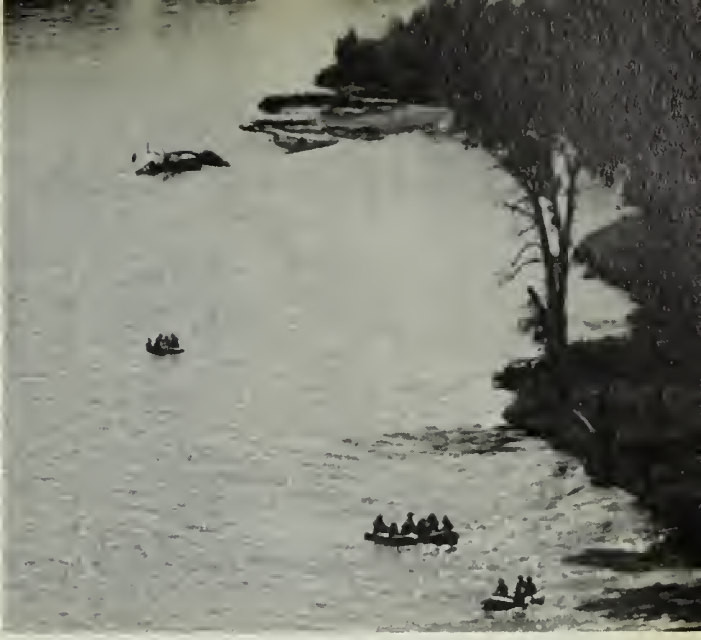
Stan Landgren was awarded a trophy by the city of Big Timber for being the oldest registered entrant. A resident of Cody, Wyo., he is a very young 77.

Another trophy, presented jointly by the participating mayors, was given to two individuals from Peter, Australia, for journeying the farthest. Additionally, there were trophies for the largest float, the largest family, the most original costume and the most unusual craft.

Although many trophies were awarded, the main reason the thousand persons on the river showed up was for the sheer enjoyment of the trip and the camaraderie of the event.

Everyone in the Navy rafts finished the journey, a feat in itself. The exhausted but elated crewmen extended an invitation to any Navy man or woman interested in testing his "rivermanship" to journey to Livingston, Mont., next July, bring something that floats and join them on the Yellowstone. Will the recruiters be there again next year? "You better believe it!" shouted Navy Recruiter John Viers.

—Story & Photos by PH1 J. A. Davidson



Read Cup Competition

Recently the U. S. Navy succumbed to the extraordinary seamanship of the Royal Navy on the high seas off the Naval Air Station in Norfolk, Va. The two navies were battling each other, not for sailors' rights on the seas nor the preservation of ocean commerce, but for the prestigious Read Cup.

The Read Cup, or the British-American Naval Trophy, was first presented in 1954 by Royal Navy Captain S. J. Read to encourage team sailing races between England and America. CAPT Read first presented the trophy when he was the Rear Commodore of the Royal Naval Sailing Association.

Since then, the cup has traveled back and forth across the ocean many times. Today, the cup is on display in the sailing Hall of Fame at the U. S. Naval Academy, Annapolis, Md. The British want it back.

However, just because the British won this match doesn't mean they will regain the cup. Points are added for each race during the calendar year to determine which Navy will hold the cup for the following year. There were five years with no competition since the establishment of the Read Cup.

This is the first time that a Read Cup race has been held in the waters adjacent to a Virginia city. When Her Majesty's Ship *Ark Royal*, the only carrier in her fleet, was scheduled for a port visit in Norfolk with a number of other British ships, the Royal Navy saw a chance to add a few points toward the return of the cup.

The battle of seamanship consists of two team races under the International Yacht Racing Union rules with at least three boats on each side. The craft are exchanged during races which are held on the same day.

The sailors raced 12 craft—*Skipjacks* and 14-foot *Bosuns*. Each encounter counted as one match, and

each match was run by a properly constituted racing committee including representatives from each navy.

Any class sailing boat may be used, but sailors participating must be active Navy or Marine personnel. They don't have to be members of the Royal Navy Sailing Association or its U. S. Navy equivalent.

The sailing club at Norfolk is a member of the worldwide U. S. Naval Sailing Association.

—Story by PH1 Bob Woods
—Photos by PH1 Harold Phillips
PH3 Dwain Patton

Iceland-Land of Variety

More than 5000 U. S. servicemen and their dependents are stationed in Iceland. Most are unmarried men and women serving one-year tours.

Just outside the gate at the U. S. Naval Station Keflavik, a NATO base, is the city of Keflavik. It is not a typical Navy town: there's no strip, there're no bars, there's only one restaurant. There're no flashing neon lights and no English language signs.

Keflavik is a quiet fishing village, similar to those found along the coast of New England in the U. S.

Reykjavik, the capital, about 40 miles from the base, is a clean, thriving city of more than 100,000 people. No concessions have been made to accommodate tourists there either. At first frustrating to newly arrived American servicemen, the more adaptable come to realize there is something in Iceland to envy. There's no pollution; no slums; no illiteracy; and little crime. While the cities are modern, clean and progressive, Icelandic people have changed little in their beliefs and ideals during their 1100-year history.

Reykjavik offers cultural entertainment in European tradition. Concerts, museums, art exhibits and a broad variety of shops are available for those who wish to find them.

Young Navymen are likely to be discouraged when they learn that men through E-3 must wear uniforms in certain off-base areas. Further, a curfew is imposed on E-5 and below. These are difficult facts for some servicemen to grasp, particularly those who have visited other foreign countries. Restrictions, which are gradually being relaxed, remain from a less harmonious time when U. S. forces first arrived in 1951 under the bilateral U. S.-Iceland Defense Agreement.

A large amount of U. S. funding allocated to Keflavik is channeled into recreational facilities keyed to the young serviceman. It is primarily the person who stays in the barracks who finds liberty in Iceland difficult to enjoy. Families make their own recreation and with the mobility of automobiles tour this unique and varied island.

Last year, a swimming pool was opened in the station's field house, where there already existed basketball courts, handball and paddleball courts, a weight room, sauna baths and steam rooms.

For the sports enthusiast a special services gear issue room features a wide variety of supplies for practically any sport, while bowling lanes and a billiard room are operated near the barracks areas. Base hobby shops include an automobile repair shop, stereo center, leather, ceramics, photography and a well-stocked crafts retail store.

The USO offers a rounded recreational program daily. There, a serviceman or dependent can play ping-pong, chess or other table games, read, watch television or snack. A 15,000-book library is located in the USO building and a large selection of current magazines and newspapers is maintained. The base theater features at least two films daily, while various service clubs offer both dining and entertainment.

Facing page top left: American crew in Skipjack 24 maneuvers to spill "bad air" into the sails of their British opponents. Top right: Americans and British battle for position on reaching leg of first race. Bottom: Ceramics workshop is one of several base hobby shops available in Keflavik. This page, above: Base high school basketball team uses the base gymnasium for practice. The court also has provisions for volleyball. Bottom: The recently opened indoor swimming pool offers year-round comfort for aquatic sports.

Hunters and fishermen travel annually to this country because it is noted for its birdhunting and salmon and trout fishing. Military sportsmen can also take advantage of the game season, obtaining equipment through Special Services or the base Rod and Gun Club.

Skiers will find inviting slopes near Reykjavik and golfers will find courses to challenge anyone's abilities.

Even though winter nights are long and often dreary, summer days are long and bright. Outdoor recreation activities are limited only by an individual's stamina and desire. Camping and hiking trips around the island are popular.

There are restrictions and the winter climate is harsh—although less so than many northern United States areas—but Iceland is a land of endless variety.

—story and photos by JOCS James Johnston

BICENTENNIAL COMMAND

PHILADELPHIA

No Bicentennial study would be complete without mention of the city of Philadelphia and all that it has contributed to this nation's heritage. In the words of Rear Admiral Joseph L. Coleman, former commandant of the Fourth Naval District, "The Navy was born in Philadelphia, the Marine Corps was born here and, most important, our country was born here."

The admiral continued, "The Navy and Marine Corps played an important role then in the birth of our great nation and we intend also to do our part now in making the Bicentennial celebration here the greatest event to happen in the Delaware Valley." Following those words, Philadelphia Naval Base embarked on a program which, like the Naval Radio Station (T), Cutler, Maine, gained it recognition as a Bicentennial Command.

Begun 4 July, Philadelphia's program gained momentum two weeks later when the Fourth Marine Air Wing Drum and Bugle Corps from New Orleans, La., and

more than 100 Marine Barracks personnel presented the impressive and colorful Marine "Evening Parade" and "Flag Pageant" for visitors. Before this patriotic event on the Marine Barracks parade ground, the drum and bugle corps performed a special concert.

Marine evening parades, flag pageants and military band concerts continued every Friday evening throughout the summer. In addition, the base conducted a program of open houses each Friday, Saturday and Sunday all summer long. Visitors took walking tours through the aircraft carrier *Intrepid* and saw numerous war planes, ship models, pictorial displays, vintage Marine uniforms from Revolutionary War times to the present, and scale models of the *Apollo* space capsule and lunar landing module *Intrepid*.

Visitors also inspected displays of combat equipment, including a tank, aircraft, artillery guns and Navy shipboard gun mounts, on the Marine parade ground. Inside the entrance of the Marine Barracks, combat art was on display. A final highlight of Philadelphia's summer program was USO variety shows each Saturday and Sunday.

Apart from the Bicentennial Command program are numerous national bicentennial projects sponsored by the Department of Defense and various branches of the service. Included are: the Bicentennial Band which is touring the nation giving concerts of American music; a two-record heritage album of outstanding military bands and associated choral groups; and Bicentennial Vans which began traveling throughout the country 4 July with displays depicting the contributions of the Armed Forces to the founding and growth of the nation and the preservation of freedoms people enjoy.

Last, but not least, the Navy, Army and Marine Corps celebrate their 200th birthdays in 1975 and each service will commemorate the occasions in an appropriate manner. This is the time for Americans to show pride in their heritage, and service people should rightfully share in the celebration.

Facing page: Carrier Intrepid (CV 11), open for visitors at Philadelphia Naval Base. Top: U. S. Navy Ceremonial Band from Washington, D. C., conducts outdoor concert as part of the Bicentennial program. Middle: A plaza was constructed for the convenience of visitors. Right: USO presents weekly variety shows.

BICENTENNIAL COMMAND

U S Naval Radio Station

CUTLER , MAINE

Among those Navy commands which have been designated Bicentennial Commands is the U. S. Naval Radio Station (T), Cutler, Maine, for its participation in an ambitious historical program at nearby Machias. The substance of that program—and the events which spawned it 200 years ago—is a story all its own. That story follows:

Unless you're from Machias, Maine, or a student of the American Revolution, the "Burnham Tavern liberty pole incident" and the name Jeremiah O'Brien probably have little meaning. But for the folks of Machias, and area Navy personnel, they were given real meaning in Bicentennial observances last May.

The planning to commemorate the historical events began nearly two years ago—before the establishment of any state Bicentennial committees—and eventually involved the Naval Radio Station (T) at Cutler in East Machias, the U. S. Navy band from Newport, R. I., a minesweeper and the commanding officer of the famed frigate *Constitution.* But to understand how the plans evolved requires a quick trip back in time to May 1775.

About a month after the Battle of Lexington, the British, under General Gage in Boston, sent two sloops and an armed schooner to Machias to requisition a load of lumber. Before that incident ended, all three vessels were in the hands of the Americans in what has since been called the "Lexington of the Sea."

On arrival at the town's wharf, the sloops *Unity* and *Polly* were met by an angry crowd of citizens headed by Jeremiah O'Brien. They soon let it be known that they had no intention of loading the ships and, instead, demanded the surrender of the vessels. These same people had just a few days before set up a liberty pole (a tall pine stripped of foliage except at the top) in front of the town's Burnham Tavern. They had vowed to sacrifice their property and lives, if necessary, in defense of freedom.

The British schooner, *Margaretta*, under command of Midshipman James Moore, demanded that the sloops be loaded and that the liberty pole come down. Under threat of being fired upon by the schooner, some of the townspeople gave in and began loading. O'Brien and his followers had other ideas. Following a town meeting all voted to keep the liberty pole and fight. In quick succession they managed to capture both sloops at the wharf and forced *Margaretta* to head out to sea.

In her haste to depart, *Margaretta* damaged her boom and was forced to anchor downstream and undergo emergency repairs. Small arms fire from shore kept the schooner at bay and gave O'Brien and 35 volunteers a chance to take up the chase in *Unity.*

With muskets against four-pounders, O'Brien and his lumberjacks carried the day. The Americans lost two crewmen, and a marksman—said to be O'Brien—fatally wounded Captain Moore. The captured British crew were later paraded through Machias as prisoners.

Citizens of Machias went all out this past May to honor Jeremiah O'Brien and his followers. One highlight of the four-day celebration was the firing of a 13-gun salute by a Navy unit at the exact hour of night—2022—when Paul Revere's signal was first hoisted at the Old North Church 200 years earlier; marking the start of that historic ride which warned colonial New Englanders of the approach by land of British forces. The gun salute was fired by Chief Gunner's Mate Wayne F. Jordan, Equipment Operator 1st Class John C. Bozick and Engineman 1st Class Paul D. Casey. A 40-mm saluting gun secured aboard a flat-bed truck was used for the occasion.

Navymen also took part in the reenactment in front of the same Burnham Tavern of the liberty pole-raising and Commander Tyrone G. Martin read a message to 4000 spectators gathered at Fort O'Brien.

The minesweeper USS *Direct* (MSO 430) called at the Cutler Radio Station (the first Navy ship believed to have ever visited the facility) and tours were provided for the visiting public. Four Navy units took part in a three-mile parade, highlighting the week's commemoration.

O'Brien reaped honors for Machias and America in 1775. His hometown reaped honors in his name in 1975. Before the 30-event, four-day celebration ended:

- The town was named a Bicentennial Community.
- Its Centre Street Congregational Church was placed in the directory of national landmarks (beside the Burnham Tavern).
- The University of Maine at Machias reaped Bicentennial honors.
- The Naval Radio Station (T), Cutler, received the Bicentennial flag from the Navy Department.

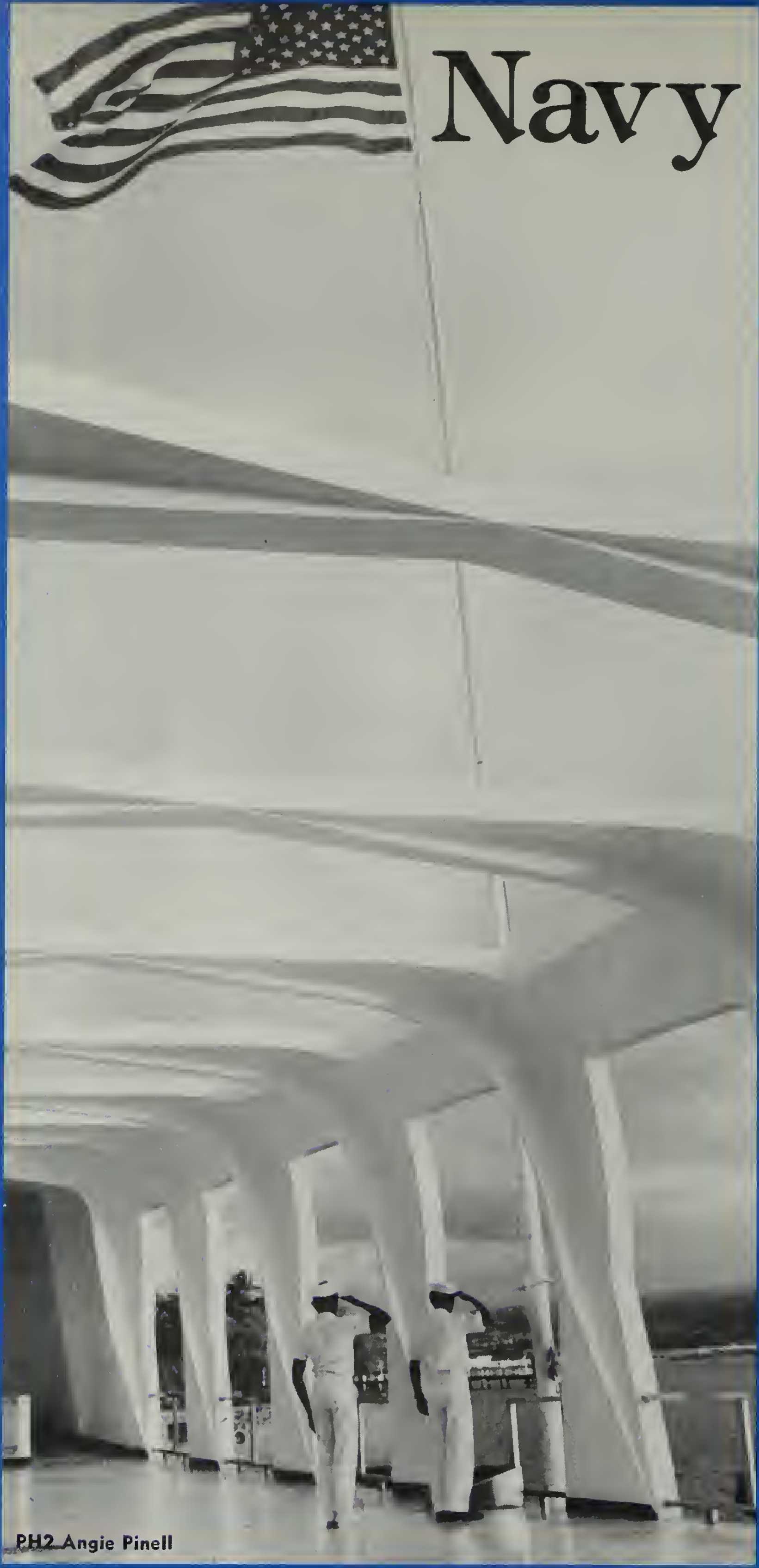
If these are not enough honors, the last is probably the most cherished—the Navy announced to the people of Machias that a new *Spruance*-class destroyer will be named "O'Brien."

—Story idea by LTJG E. C. Champagne, USNR-R

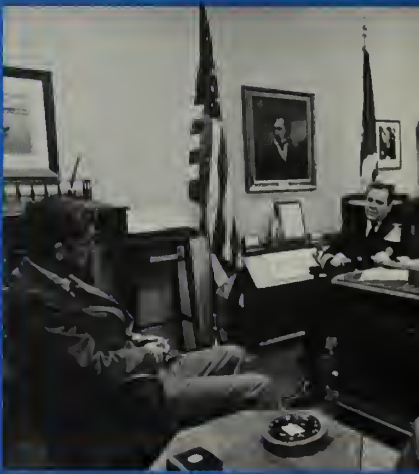
The rugged coast of Maine today, not far from the scene of the early naval action by citizen-sailors of Machias exactly two centuries ago.

Navy Photo

A Moment



PH2 Angie Pinell



Legacy

n History

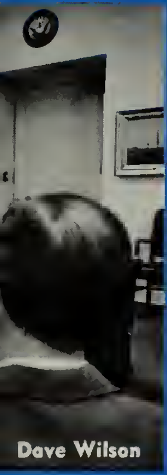
LTJG Chris Nemeth

PHAN Mike Lingoes

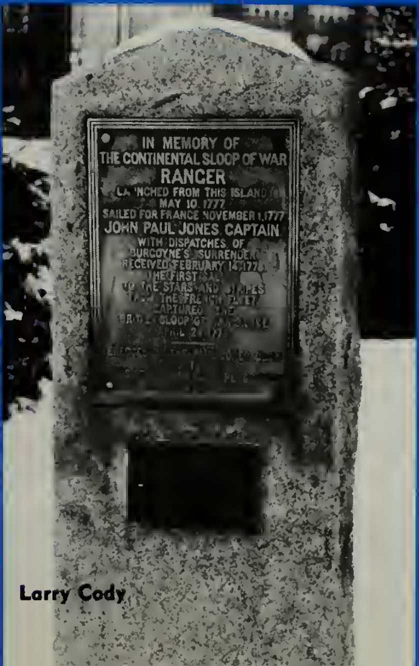
At 1800 Greenwich Mean Time, 14 Feb 1975, Navy photographers around the world snapped the shutter on a moment in naval history. At that exact time, in 1778, the "Stars and Stripes" flown from the U. S. armed brig Ranger, *received the first official salute by a foreign power. A nine-gun salute was rendered by the flagship of Admiral La Motte Piquet, commander of the French Atlantic Fleet, in Quiberon Bay, near Brest, France.*

This same moment in the Navy's Bicentennial year pictorially revealed a Navy of modern ships, aircraft, equipment and people. In many instances, however, the flavor of tradition is retained.

As in 1778, there were offical honors rendered the American flag. In Hawaii, sailors paused to honor the ensign as it was raised over the Arizona Memorial in Pearl Harbor. Elsewhere, Navymen aboard ship stopped to recognize traditional morning colors.



Dave Wilson



Larry Cody

PHCM Ken Bumpus (Ret)

PHCM Ken Bumpus (Ret)

Unknown

PH2 Ernest Myette

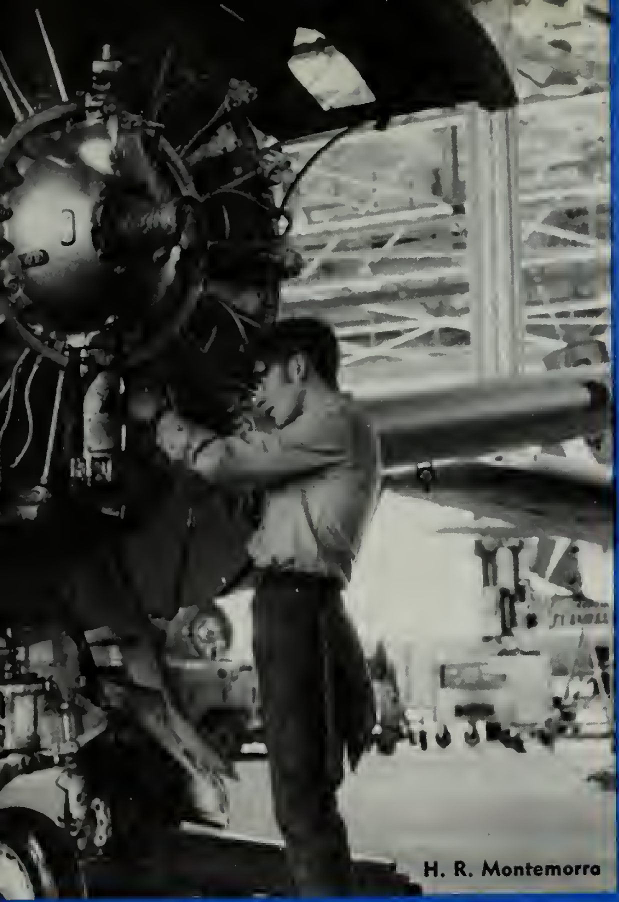
For some new Navy people, 1800 GMT, 14 Feb 1975, found them being trained for their roles in today's Navy. This included instruction in firefighting for some recruits, while others drilled on the parade ground.

Ted Morrow

Unknown

Unknown

PH1 Lei Underwood

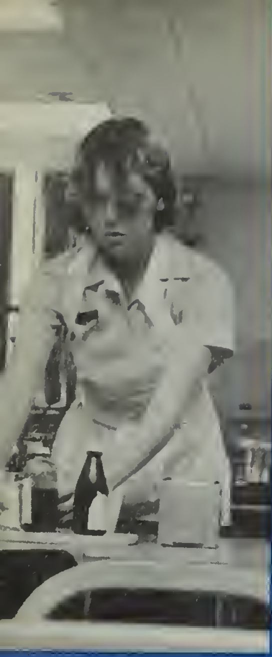

H. R. Montemorra

MS1 Wayne Murray

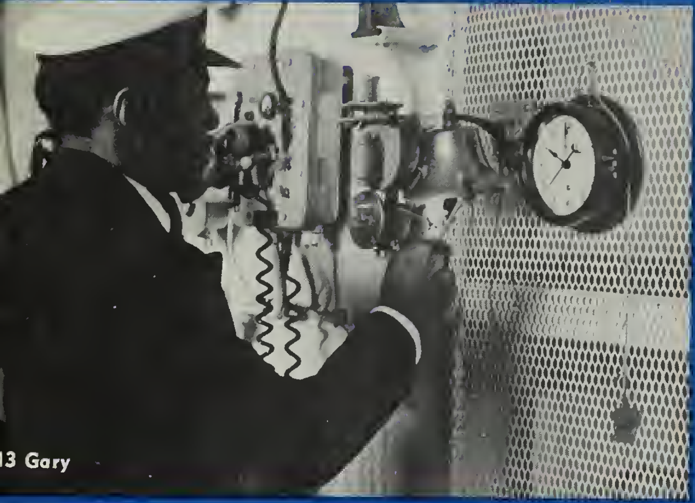
LT Melville Walters III

Navy ships were captured on film in a variety of situations. There were some underway, while others were in port and still others sat in drydock. Navy aircraft were likewise photographed.

The flavor of tradition was perhaps best captured in the people of today's modern Navy who were busy carrying out the daily routine. Boatswain's mates passed the word over the 1MC, deck hands chipped paint and scrubbed passageways, administrative types shuffled papers and technicians in various fields engaged in operation, repair and maintenance of the tools of their trades.



Roy Roper



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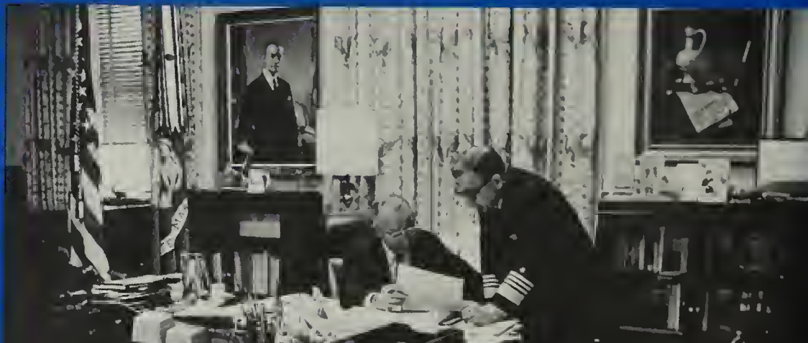
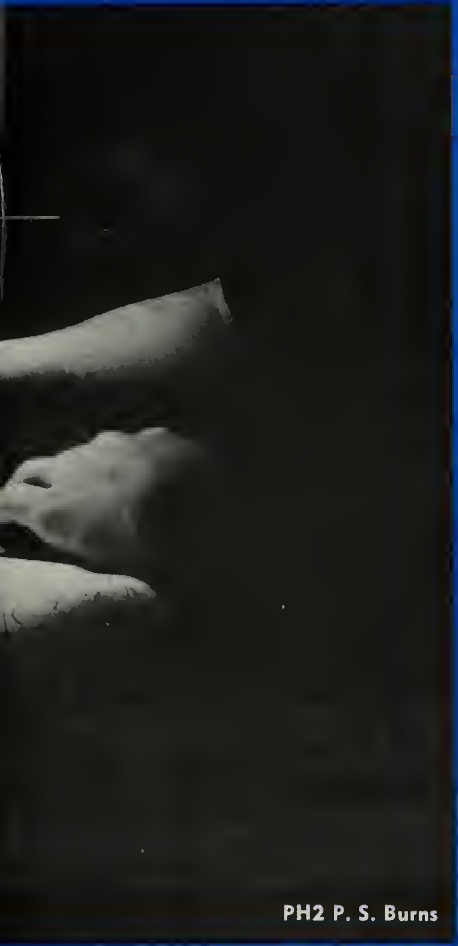
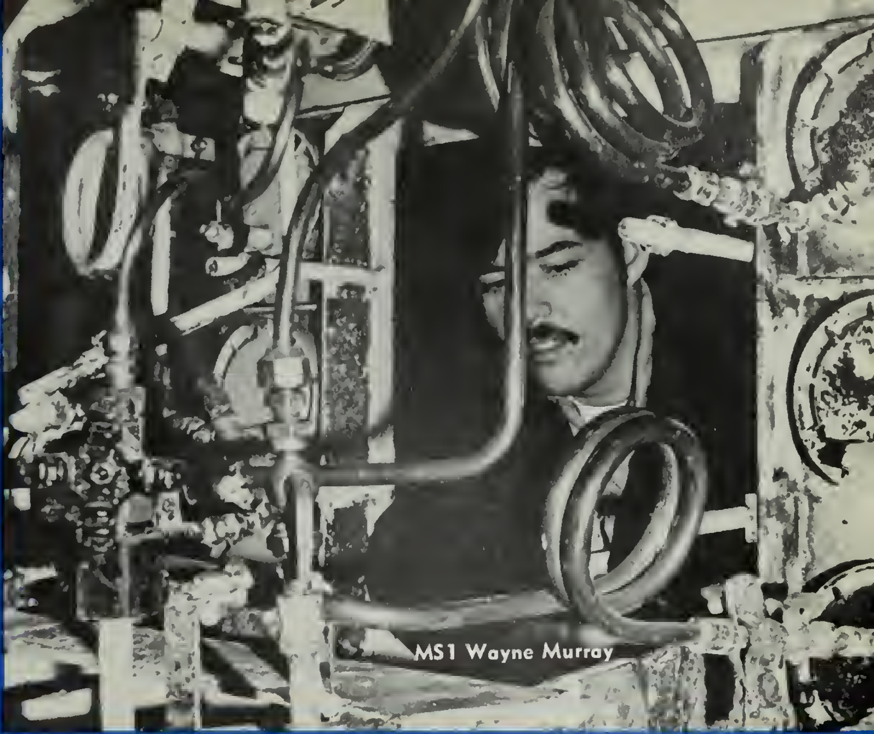


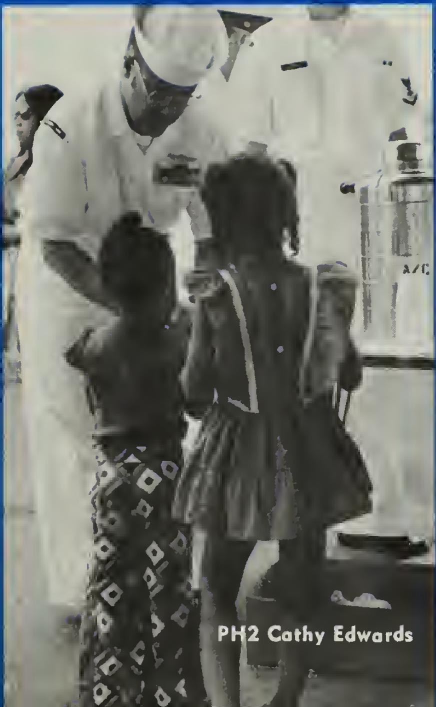
JOC Byron Whitehead


PH2 P. S. Burns

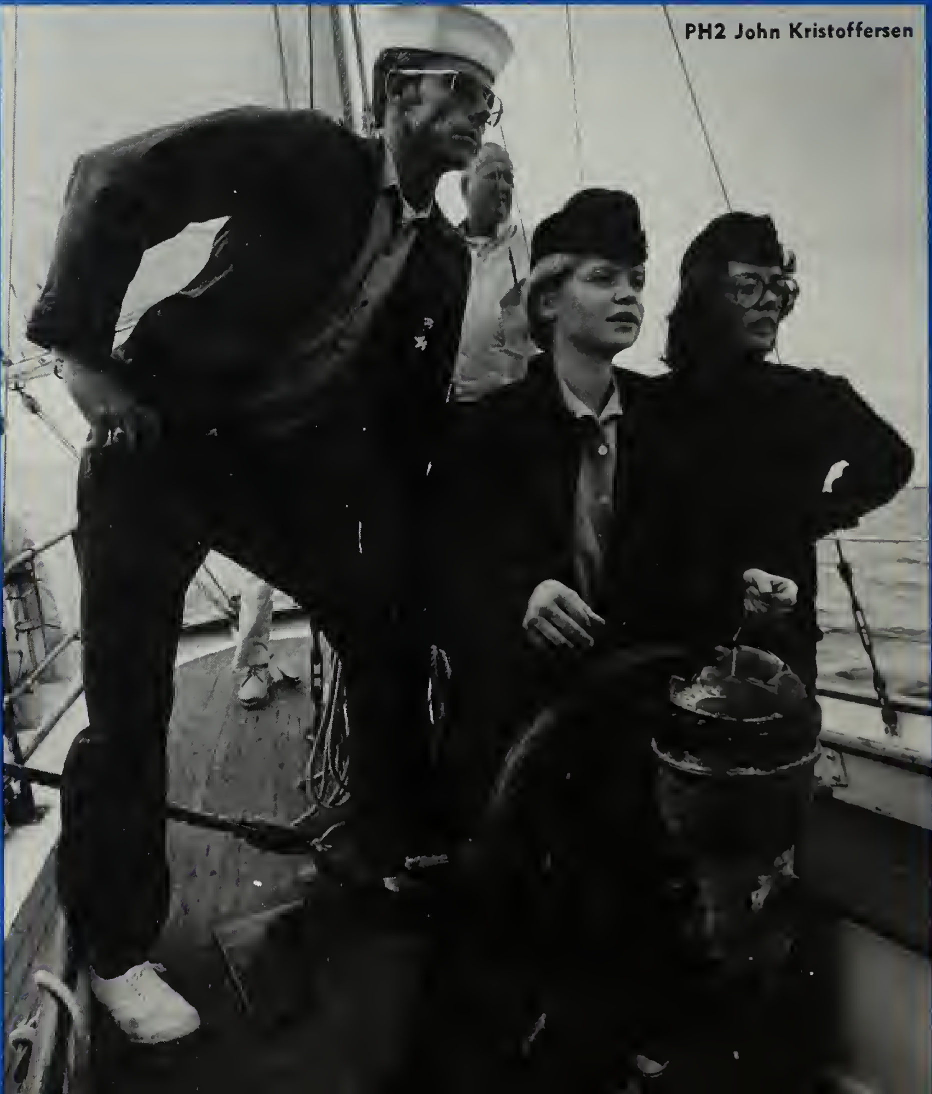

MS1 Wayne Murray

In still other areas, Navy mess management people busied themselves with preparation of the day's menu, quartermasters plotted ships' courses, musicians performed, Navy medical personnel attended the many needs of all their patients and Navy planners met to discuss policies, procedures, etc.

PH3 Ian Sinclair


PH2 Cathy Edwards

PHC Wright



PH2 John Kristoffersen

Unknown

When the Navy decided to have its photographers snap the shutter on events at 1800 GMT, 14 Feb 1975, it was on the premise that the resultant collection of photographs would be used to prepare a record of this day for all time. For the most part, this is a pictorial account of people "doing their thing," with glimpses of the equipment and hardware which make today's Navy one of the most respected in the world.

There is no denying that the U. S. Navy continues to build on proud traditions established by its forefathers such as John Paul Jones.

It is hoped that this portrayal of the Navy in 1975 will be as cherished as the deeds of those brave men and women who have dedicated themselves to raising the Navy to its lofty position in the world today. It is also hoped that the Navy will continue to be blessed with "fair winds and following seas" in the years ahead.

John Sheppard

HISTORY of the CORPS

Since that eventful day when the Continental Congress hastened to outfit two frigates for the protection of our coast, many men have gone "down to the sea in ships." Not all aspired to be masters of their vessels; many preferred to serve their country as a specialist in their own chosen field.

Ministers, pursers, surgeons and engineers all found a home in the Navy. In the beginning they had no separate identity, only an awareness that what they were doing was vital to the preservation of our nation's freedom. Slowly their jobs became more complex, the demands overwhelming. The Navy Department and Congress soon realized the important role these specialists were performing and began to incorporate their usefulness into specialty corps.

The ministers became the Chaplain Corps; pursers, the Supply Corps; surgeons, the Medical Corps; and engineers, the Civil Engineer Corps. Today four more specialties—Nurse Corps, Dental Corps, Medical Service Corps and Judge Advocate General Corps—combine to make the Navy team one of complete service both to its members and the nation.

The histories of these corps together provide a stirring account of men and women who contributed to make the organizations of which they were a part a strong branch of an even stronger tree. Their accomplishments are part of today's Proud Tradition.

Medical Corps

When men first went to sea there was no system of providing medical assistance for the ill and injured. These first vessels seldom ventured far from shore and had little if any space for care of the wounded.

When large ships were built and sails were rigged to supplement or replace oarsmen as a means of propulsion, longer voyages became possible. Ships were able to remain at sea for days, weeks or even months before putting into port. More self-sufficiency became necessary and, eventually, someone trained in the art of medicine became an integrated member of the ships' companies.

It is known that the ancients, among seafaring nations, provided medical services ashore and afloat. The Phoenicians, Greeks and Romans were among those peoples who often designated certain vessels as hospital ships. The larger ships carried one or more medical men and assistants.

While our founding fathers were debating whether or not to institute a Navy, medical men were already sailing in American ships. Early Navy physicians served largely without commissions except those issued by the commanding officers of ships to which physicians were attached for a specific cruise.

At this time there were two basic categories of medical men: surgeons, who had established reputations as physicians, some even holding degrees in medicine; and surgeon's mates who had received medical training but were relatively inexperienced. Both surgeons and surgeon's mates were classified as commissioned officers, but were not eligible to take command. Surgeon's mates ranked below surgeons but above warrant officers.

In 1798 the Marine Hospital Fund was established. A payment of 20 cents per month by every person in the naval service went towards the fund. However, the fund could not at that time be applied to the maintenance of naval hospitals since none existed. One year later Congress attempted to provide a physician general, a suitable number of hospital surgeons and a suitable number of surgeon's mates for both the Army and Navy. These individuals were to direct the medical activities of both the services but, because of the impending war with France, the legislation was never passed.

On 26 Feb 1811, Congress approved "An Act establishing Navy Hospitals." This act directed that the money collected from naval personnel should be paid to the Secretaries of the Navy, the Treasury and the Army, who were to become Commissioners of Navy Hospitals. This fund, together with the unexpended balance of the Marine Hospital Fund, was to establish a permanent revolving fund for Navy hospitals. Later this fund was to be known as the Naval Hospital Fund.

The commissioners were required to choose suitable sites for the building of hospitals and then to erect buildings upon these sites. Ten years lapsed before the first site was chosen at Washington, D. C., in 1821. This was followed by the purchase of other sites: Chelsea, Mass. (1823); Brooklyn, N. Y. (1824); Philadelphia, Pa. (1826); and at Norfolk, Va. (1827). Early in 1827 construction of the first naval hospital at Norfolk and the naval asylum at Philadelphia began.

Professional qualifications and a regulated system of medical appointments were established by Congress in 1828. This act provided that "no person shall receive the appointment of assistant surgeon in the Navy of the United States, unless he shall have been examined and approved by a Board of naval surgeons, who shall be designated for that purpose by the Secretary of the Navy Department."

Introduction of the bureau system and establishment of the Bureau of Medicine and Surgery in 1842 contributed much to the development and efficiency of the Medical Department. Increased quantities and improved quality of medical equipment and supplies were soon made available, and the growth and organization of the Medical Corps received a considerable impetus. Well equipped hospitals had been constructed at Nor-

William P. C. Barton, M.D., Surgeon, U. S. Navy, Chief of Bureau of Medicine and Surgery, 1842-1844.

folk, Philadelphia, Boston and Brooklyn. The construction of steamships in that decade stimulated new thought for better ventilation and more space in living quarters and in sick bay.

Surgeon William P. Barton, who entered the Navy in 1809, was selected as the first Chief, Bureau of Medicine and Surgery. The total staff of the bureau consisted of five individuals: Dr. Barton, an assistant surgeon and three civilians—two clerks and a messenger.

During the Civil War a number of medical officers resigned and many served in the Confederate States' Navy; the United States Navy's Medical Department expanded during this period. The first hospital ship actually commissioned as such by the Union Navy came on the scene in 1862. This was *Red Rover*, a sidewheeler captured from Confederates and converted for service as a hospital ship. On this ship volunteer female nurses served, the first to serve on a ship of the Navy.

The Civil War took a heavy toll in lives, the lifesaving efforts of the Navy's doctors notwithstanding. All told, 33 Navy surgeons were killed during the conflict.

After the war there was the normal reaction to disarm and reduce the size of the military forces. Many ships were scrapped and the number of personnel declined.

On 3 Mar 1871, Congress reacted to the growing sentiment for better care of our fighting men and enacted the Appropriations Act which established the Medical Corps as a separate entity and a staff corps of the Navy. The Act also provided that the chief of the Bureau of Medicine and Surgery would have the title of Surgeon General and relative rank of commodore.

It was not until 1883 when Uniform Regulations officially specified any Medical Corps device. Uniform Regulations that year described the Medical Corps device as ". . . a spread oak leaf embroidered in dead gold, with an acorn embroidered in silver upon it." While some have considered the device symbolic of strength and virility associated with the sturdy oak tree, the most frequently accepted origin of the device is related to the druids, a religious sect in pre-Roman Gaul and Britain. Druids presumably gathered in forests and adopted the oak leaf as a symbol of identification.

That same year a Museum of Naval Hygiene was founded in Washington, D. C., for the display of subjects of medical significance selected by the office of the Surgeon General. In 1902 the museum was merged with, and retitled as, the Naval Medical School.

The 20th Century opened a new field in naval medicine and added a brilliant chapter to the annals of the Medical Department. Dr. P. M. Rixey was chosen Surgeon General in 1902, a choice that proved fortunate for the Navy. Dr. Rixey established the Naval Medical School, enabling new medical officers to receive instruction in the subjects belonging peculiarly to naval medicine. He also established a policy of placing men of long service and eminent abilities to head the school.

Dr. Rixey was a close friend of President William McKinley and his successor, Theodore Roosevelt. He had been the White House physician and was one of the physicians who attended President McKinley when he was fatally shot.

Dr. Rixey continued to nurture his friendship with President Roosevelt and soon became one of his trusted advisers. Roosevelt was himself a strong advocate of a large Navy and the two men often saw eye to eye on naval matters.

In addition to expanding Medical Department facilities, Rixey instituted a program of postgraduate training and specialization for officers of the Medical Corps and the first training school for the Hospital Corps. His efforts and personal prestige also contributed greatly to the successful culmination of the long struggle to create a Nurse Corps; he tried repeatedly to establish a Dental Corps but met with failure in Congress.

The impending threat of war moved Congress to act, resulting in the overall Expansion Act of 1916. This act made possible the reorganization and expansion in all Medical Department personnel programs by removing fixed statutory limitations. By this law the strength of the Medical Corps was to be based on a ratio predicated on the combined strength of the Navy and Marine Corps. The same legislation created the rank of rear admiral in the corps and extended authority to commanding officers of naval hospitals and ships to convene court-martial boards.

At the outbreak of World War I, the Bureau of

Specialized surgery is available to military personnel in modern medical facilities.

Medical Corps

Medicine and Surgery proposed a program involving both emergency and permanent expansion of hospital facilities, and requested over $3 million for that purpose. However, Congress did not feel such expenditures were justified at that time. Ultimately, the appropriation was granted but limited to temporary structures only. This restriction required the Surgeon General to hold in abeyance permanent plans for expanding hospital facilities. However, sufficient funds were made available to build the Navy's largest and most modern hospital, San Diego, Calif., in 1919.

After the war, postgraduate work in the medical and surgical specialties was encouraged. The problems of the clinician were also given special attention. Such modern diagnostic aids as the electrocardiograph, basal metabolism equipment and other scientific evolvements of diagnostic value were installed in all major Medical Department facilities.

An outstanding achievement of the corps during the lull between the wars was the high degree of treatment afforded retired personnel. Beginning in 1921, when the first few veteran patients were admitted to naval hospitals, until the outbreak of World War II, the number of such patients increased from month to month.

By then, the Navy had taken to the air and with this development had come new medical problems. To meet these the bureau established a course of aviation medicine at the U. S. Naval Medical School in 1921 and instituted a broad research program in collaboration with the Army Aero-Medical Research Laboratory at Wright Field, Dayton, Ohio. In 1939 the Naval School of Aviation Medicine and Research Center at Pensacola, Fla., was set up—it became official several years later. This project gave considerable impetus to the practice of aviation medicine in the Navy.

About this same time, research and many practical experiments were being conducted in all aspects of submarine medicine. One of the early significant accomplishments in this field was the development of the submarine escape training tank. New adaptation tests to facilitate examination and selection of submarine personnel were also devised.

Although much progress was made during the years between the wars, the war itself made demands on corps personnel that were unparalleled in history. The achievements of military medicine during this conflict are legion. At the beginning of World War II, the Medical Department had less than 13,000 persons; in 1945, at the peak of expansion, it included 169,225 men and women. At the time of the Japanese attack on Pearl Harbor there were 18 naval hospitals in the continental limits of the United States. By August 1945 there were 56 established continental naval hospitals, 12 hospital ships, 12 fleet hospitals, 16 base hospitals and a large number of dispensaries.

Once the war effort gained momentum and the enemy had been checked, it became possible to inaugurate more effective provisions for hospitalization and care of the sick and injured. The first field tests of the mobile hospital units conducted in the early stages of mobilization disclosed defects that were readily corrected. Later, under actual war conditions, the value of these innovations in field medical service was firmly established.

The number of casualties from malaria and jungle infections reported in the primary phases of the Pacific campaigns were in appalling ratio to battle casualties. Health information was inadequate for the most part, so that no accurate picture of the diseases prevalent in an area was available. The intensity of malaria infection was underestimated, very little information was available regarding scrub typhus. Consequently, a concerned and intensive effort to devise necessary measures to conquer these devastating military hazards was originated and assigned top priority. From these studies evolved the malaria and epidemic control units, the predecessors of today's environmental preventive medicine units.

Another important task confronting Medical Corps members at this time was the rehabilitation of the disabled. To meet this responsibility the Surgeon General initiated a broad rehabilitation program that contributed materially to the favorable vital statistics attained by corps members. The individual patient found physically or mentally incapacitated for further military duties received maximum necessary adjustments in advance of his discharge to enable him to secure gainful employment.

After the war, several important changes affected the Medical Corps officer: reorganization of the Bureau of Medicine and Surgery; passage of several laws aimed at raising the quality of medical care in the armed forces; and the establishment of the Department of Defense and the Armed Forces Medical Policy Council.

With the outbreak of hostilities in Korea, the Medical Corps was once again faced with building its ranks to meet the needs of war. Because the United States entered the war as part of a United Nations force, corps members found themselves treating not only American casualties but foreign as well.

Following that conflict, the Medical Corps continued to expand to meet the need for increased services. Use of helicopters to transport battlefield casualties was refined for invaluable use later, during the Vietnam conflict.

Today nearly 4000 Medical Corps officers care for the needs of Navy and Marine Corps members and their families.

Looking toward tomorrow, Medical Corps members will be venturing into both inner and outer space with Navymen to keep them healthy and to make life more enjoyable for all.

Supply Corps

Although the Supply Corps' formal history begins in 1795, the tradition of seagoing officers specially trained to manage the business affairs of the ship dates back to the 11th Century, when British agents, called clerks, were responsible for the entire fitting out of vessels in the service of the king.

These clerks were held in low repute by the crews they served, who often felt they were being cheated in the purchase of necessary items. Such terms as "purser's shirts," meaning a loose, poorly fitting garment, and "purser's candles," meaning the smallest possible candle, are occasionally heard in the British Navy even today.

Although modeled on the British clerk, the early American "supercargos" or pursers were considerably more honest—or at least they had better reputations. The American Navy never had to require its pursers to whistle continuously while inventorying provisions to prove they were not eating the raisins which belonged in the pudding.

But pursers aboard American fighting ships in the 18th Century hardly needed to settle for raisins. The law "limited" his profits on sales of personal items for the crew to a 50 per cent markup. Items of secondary necessity brought a tidy 25 per cent, while "slops"—clothing and small stores—netted 10 per cent.

The percentage profit system had begun when the owners of private vessels put a man they could trust aboard to look after the monetary interests of the ship. By making it in the purser's interest to cut down on expenses, the owners turned a higher profit. Naturally, the more successful the voyage, the greater amount the purser made.

When the Naval Armament Act of 1794 was passed, it authorized one purser for each of the new ships. He was to be a warrant officer and responsible for feeding, paying and selling clothing and small stores to the crew. He was paid $40 a month and allowed two rations a day.

The Supply Corps was officially born in 1795, when Congress established a Purveyor of Public Supplies, thus instituting Navy procurement and supply ashore. Tench Francis and Israel Whalen, the first and second occupants of the position respectively, were essentially purchasing agents, responsible for procuring and providing naval stores, as well as "generally all articles of supply requisite for the service of the United States." Eventually, their responsibilities were taken over by what is the Naval Supply Systems Command today.

As the demands of the Navy increased, it became necessary to appoint additional civilian administrators for Navy supply, and in 1798 the office of Accountant of the Navy was created. Pursers' responsibilities increased too—they were required to have a speaking knowledge of French and Spanish, to conduct business with foreign merchants, and to submit their records for regular audit by the Treasury department.

Pursers were hired to look after monetary interests aboard ship.

Pursers were not expected to engage in combat, and were given battle responsibilities below deck in the Navy's early years. But as one chief gunner wrote in the 19th Century, "for some years they have been very much the combatants, in active participation with pistol, sword and cannon, in assisting their brethren-in-arms of the line."

Despite this reference to "brethren-in-arms," pursers faced a long, uphill fight to achieve equality with officers of the line, and much of their early history involves attempts to be treated equally. One goal was reached in 1810, when pursers were given status of commissioned officers. Along with this went additional responsibilities: to keep a record of ammunition ordered and expended, and a muster of the officers aboard his ship.

In 1818, pursers were authorized shore duty for the first time, when "Pursers of the Yard" were appointed at Navy shipyards. As at sea, their primary responsibilities were to pay and feed all the officers and men, as well as mechanics and laborers. They were allowed to choose naval storekeepers to assist them.

The question of relative rank of pursers came up in 1833, when Navy Department regulations placed them below lieutenants (jg). But at the insistence of a group of line captains, they were ranked with lieutenants. There the rank issue remained until 1857, when further revisions ranked pursers of over 12 years' service with commanders, and those of fewer years with lieutenants.

With the Navy reorganization of 1842, pursers gained status, by having a "home" of their own for the first time. Criticism of the Board of Naval Commissioners, which had run the Navy since 1815, led to the establishment of a Bureau system in the Department. One of the five new Bureaus was that of Provisions and Clothing.

It was charged with handling "all provisions of every sort, whether solid or liquid; all clothing of every sort; all labor employed thereon; all contracts and accounts relating thereto." Thus, after 47 years of service, the supply organization of the Navy finally became an entity of its own right. Ironically, a civilian was appointed to head the Bureau; he was the only non-officer to head one of the five new Bureaus.

Congress debated compensation for pursers in 1842, then passed legislation that provided for a standard pay scale to replace their former rations, allowances and pay. They received between $1500 and $3500 a year—depending upon the size of their ship. Previously, they had been paid $480 a year exclusive of rations, but the law allowed them to make a profit of from 10 to 50 per cent on goods sold to the crew.

Just before and during the Civil War, a series of events led to greater status for the pursers. In 1858, their titles were officially changed to paymasters, in recognition of their duty as Navy pay officers. And in 1861, Congress provided that appointments to the Corps of Paymasters could be made only from the list of assistant paymasters. Then, in 1862, legislation required that the head of the Bureau of Provisions and Clothing be a paymaster. Finally, a separate Pay Corps was established in 1870, and its head was termed paymaster-general.

More important than changes in their titles was the growth of paymasters' responsibilities in the decades after the Civil War. The experiences of the war made it clear that the system of making purchases ashore through civilian Navy agents, a system established in 1776, led to abuses. Hence, in 1865 the Navy agents were discontinued. Their duties devolved on the paymasters who were now charged with the complete responsibility for supplying the Navy ashore as well as afloat. Before 1886, each bureau maintained complete control over its own purchases and their storage and issuance. This resulted in duplication and a Navy inventory far in excess of needs.

This problem was met with the establishment of the general storehouse system in 1886. Stocks were consolidated under one general storekeeper at each Navy yard and station. Aboard ship, stock was consolidated in a single supply department managed by a paymaster. While these steps made for more efficient administration, they also increased the responsibilities of the Pay Corps officers. Shortly thereafter the Navy created the Navy stock fund, an appropriation that is used to purchase items of standard Navy stock, with each bureau being charged for an item when it was issued. Responsibility for administering the stock fund was given to the Pay Corps.

At the time the general stores system was introduced ashore, and shortly thereafter afloat, the Navy felt the need to reorganize its financial system to match its supply system. All accounting data was to be kept in the Bureau of Provisions and Clothing, thus ending the previous fragmentation and making it possible to determine the total value of Navy Property and the expense of maintaining it. Property and appropriation accounting concepts were introduced by Paymaster Albert S. Kenney. Thus the officers of the Pay Corps became the accountants for the Navy in much the same fashion that they had become its storekeepers. And with its increased responsibilities, the Bureau of Provisions and Clothing was renamed the Bureau of Supplies and Accounts in 1892.

Aboard ship, a variety of revolutions were taking place as the 19th Century ended. Foremost among these was the end of the berth-deck messing situation, and the introduction—under the leadership of Pay Corps officers—of the general messing system. The serving of all the crew in a common mess, introduced by Paymaster John S. Carpenter aboard USS *Texas*, led to better food, improved morale, and distinctly more healthful conditions at mealtime. In 1901 the paymaster replaced the executive officer as the officer in charge of the crew's messing, and took over total responsibility for purchasing, storing, issuing, preparing, and serving the food.

The ship's store was inaugurated aboard USS *Indiana* in 1896, which at first sold only beer and used the profits to buy additional food for the mess. But the sale of beer created a storm of criticism among officers who feared a decline in discipline and efficiency.

The ship's store flourished not so much on the sale of beer as on such personal articles as towels, soap, candy and tobacco. Great variation among stores in merchandise, pricing, and quality of goods led the Navy in 1915 to issue regulations on these subjects. Profits from the stores were set aside to be used for the crew's morale and welfare activities, and the pay officer was given management control over the stores.

The development of underway replenishment, first demonstrated in the War of Tripoli, received impetus in the Spanish-American War. Supplying Dewey's ships in the Philippines was a significant challenge to members of the Pay Corps, but the logistics difficulties were met through regularly scheduled supply ships, including refrigerated ships, loaded on the west coast.

A few years later, the famous cruise around the world by the Atlantic Fleet helped refine the mobile supply system. One of the most significant developments during the cruise was the initial widespread use of "ration-dense" foods—items which store in limited space but can be reconstituted to make tasty, nourishing meals. These included dried milk and eggs and dehydrated vegetables.

At the beginning of the 20th Century, Pay Corps officers initiated programs which proved to be prototypes for the other military services and the entire Government. Paymaster F. T. Arms wrote the first Navy cookbook in 1902, a significant contribution to standardizing meals aboard various ships. The only previous military cookbook had contained such advice as: "The presence of wormholes in coffee should not occasion its rejection . . . since they generally indicate age, weigh nothing, and disappear when the coffee is ground."

An equally important step forward was the publishing of the Navy Standard Stock Catalog by Paymaster T. H. Hicks in 1914. By giving a standard stock number

Disbursing officer aboard a Navy ship.

to every item used by the Navy, inventory record-keeping, stock accounting and stock ordering were vastly simplified. Soon thereafter, the government initiated plans for a Federal Standard Stock Catalog along the lines of the Navy's.

The first true cost accounting system was adopted by the Navy in 1909. It was largely developed by Paymaster Charles Conard and played an important role in enabling the Navy to keep adequate control over its vast capital resources.

The final step giving pay officers full equality with line officers was taken by the Secretary of the Navy in 1918. In a general order he wrote: "the uniform of any given rank in the Navy shall be identical in every respect throughout except for the necessary distinguishing corps devices; and every officer in the Navy shall be designated and addressed by the title of his rank without any discrimination whatever."

The title supply officer was authorized in 1913 for any pay officer appointed head of a supply department ashore. A few years later the change was extended to include afloat supply departments, and then to all Pay Corps officers. In 1919 the present organization designation of Navy Supply Corps was adopted.

Increasing demands upon Supply Corps officers between the wars pointed up the need for additional specialized training. The first comprehensive Navy Finance and Supply School was created in Philadelphia in 1934, and was for a time operational at Harvard University. Today every Supply Corps officer receives, in addition to precommissioning training, a 26-week course at the Navy Supply Corps School, Athens, Ga. There he is trained in basic Navy supply procedures. But he also receives instruction in a wide range of sophisticated management techniques, including automatic data processing. In addition, over 25 per cent of corps officers hold advanced degrees, many of them masters of business administration from the nation's leading business schools.

The Supply Corps officers' specialized training proved of significant benefit when World War II broke out. The attack on Pearl Harbor touched off what was to be a battle of supplying lines in both the Atlantic and Pacific. From a relatively small-scale decentralized operation, the Supply Corps faced a sudden transition to a centralized operation supporting the Fleet, the Navy's air arm and shore installations worldwide. Supply facilities sprang up all over the world to sustain combat units.

The most recent organizational change important to the Supply Corps occurred in 1966 when, as a result of the Navy Department reorganization of 1 May, the Bureau of Supplies and Accounts was renamed the Naval Supply Systems Command. The last chief of the bureau became the first commander of the new organization and also chief of Supply Corps.

Today over 6000 men and women wear the oak leaf device of the Naval Supply Corps. Stationed around the globe, these important members of the Navy team can be found buying petroleum in Bahrain or operating the Naval Academy Dairy Farm at Gambrills, Md.

Regardless of where they serve, the Supply Corps officers' basic responsibility is to ensure the logistic support of the operating forces. This responsibility is succinctly expressed by their motto, "Ready for Sea."

Chaplain Corps

Navy chaplains are qualified ministers, priests and rabbis representing their respective faiths to the thousands of men and women in today's Navy, Marine Corps and Coast Guard.

The history of the Navy Chaplain Corps can be traced back to the beginnings of our Navy. The Continental Congress adopted the second article of Navy Regulations on 28 Nov 1775, which provided for divine services aboard ships.

William Balch, Navy chaplain, 1799-1801.

The article reads: "The commanders of the ships of the Thirteen United Colonies are to take care that divine services be performed twice a day on board, and a sermon preached on Sunday, unless bad weather or other extraordinary accidents prevent."

The ministry of a Navy chaplain is very demanding. It is a ministry of spiritual leadership, religious and personal counseling, individual and group programs, and much more. Many facets of this military ministry bear a close resemblance to civilian ministries. Others are shaped by the rigors and disciplines of the naval service.

The first chaplain known to have served in the Continental Navy was the Reverend Benjamin Balch, a man who believed in freedom, and fought alongside his comrades. A Harvard graduate, Balch was one of the Minutemen at the Battle of Lexington. Later, he reported aboard the frigate *Alliance* for duty.

In 1781, *Alliance* captured two British vessels off Halifax and Balch's deeds were recorded as such: "The peril the ship was in brought out the desperate courage of every man on board the *Alliance*, the 'cloth' being no exception. Reverend Benjamin, armed *cap-a-pie*, was seen in the midst of the fray."

Thereafter he is said to have become known on the ship as the "fighting parson." His son, Thomas, was also in the fight, and when father and son met afterwards, it was with an embrace and with the words, "Thank God, my son."

One of Reverend Balch's 12 children, William, also took up the cross and was the first chaplain known to receive a commission in the United States Navy. His commission was signed by President John Adams and he served, starting in 1799, in the vessels *Congress* and *Chesapeake.*

Long before William received his commission, some farsighted naval leaders saw the need for chaplains. John Paul Jones, recognizing the importance of chaplains aboard ship, wrote to naval authorities in 1778 seeking to obtain chaplains for the ships *Ranger* and *Bon Homme Richard.*

The letter, addressed to Henry Grand in Paris, states, "In the selection of a chaplain the following qualifications are deemed requisite:

"I could wish him to be a man of reading and of letters who understands, speaks and writes the French and English with elegance and propriety . . . whose sanctity of manners and happy natural principles would diffuse unanimity and cheerfulness thro' the ship.

"And if to these essentials are added the talent of writing fast and in fair characters, such a man would necessarily be worthy of the highest confidence and might, therefore, assure himself of my esteem and friendship. He should always have a place at my table, the regulation whereof would be entirely under his direction."

No record exists as to whether Jones was successful in finding chaplains for his ships.

Service to others and courage in the face of overwhelming odds have always been a hallmark with the corps. The word chaplain was originally the French "chapelain," or the officer appointed to watch over the sacred cloak. This dates back to medieval France and the legend of Saint Martin of Tours (336-400 A.D.) dividing his heavy cloak and sharing it with a beggar he found shivering one cold winter night at the gates of the city of Amiens. Martin became the patron saint of France; his half-cloak was kept as a sacred relic and was often carried into battle by the French kings, particularly Charlemagne.

Until the government established the Naval Academy at Annapolis, Md., in 1845, the main burden of the chaplains was to prepare junior officers for their future duties. The Secretary of the Navy expected them to be schoolteachers. On 4 May 1818, he wrote to the commanding officer of *Guerriere* saying:

"You will be pleased to select a Gentleman possessing the necessary qualifications to officiate as chaplain and instruct the junior officers in the theory of their profession."

The commanding officer preferred a schoolteacher to a chaplain and requested permission to appoint a Mr. Bonfils.

On 24 June the Secretary replied: ". . . the Department declines sanctioning such an appointment. It is the duty of the Chaplains on board our public Vessels, under the direction of their respective commanders, to take charge of the education of the Junior officers."

Chaplain Robert Thompson, in the early part of the last century, established an academy for midshipmen at the Washington Navy Yard. Laboring under often inadequate conditions, Secretary of the Navy Robert Smith realized the worth of Chaplain Thompson's academy and ordered him ". . . to remain at the Seat of Government for the purpose of attending to the education of such officers of the Navy as may from time to time apply to you for instruction in Mathematics or in Navigation."

Still it was the job of other chaplains to conduct classes aboard ship. Twenty-one-year-old Chaplain Charles Folsom, aboard *Washington* in 1816, was in charge of a small group of midshipmen. One midshipman, age 15, caught the chaplain's eye and in Folsom's words ". . . had been almost from infancy in the naval service." That young man was David Farragut.

In later years Farragut was quick to acknowledge the efforts of the "young Yankee parson" and those months spent at Tunis studying French, Italian, English literature and mathematics.

Living conditions aboard the old sailing ships were hard. The unbalanced diet often gave rise to scurvy. The public conscience of the first decades of the 19th Century permitted such practices as flogging.

The history of flogging in the American Navy has some gruesome chapters. While the Naval Act of 1799 forbade a captain to inflict more than 12 lashes for any one offense, a tyrant could easily circumvent the law by charging a man with several offenses. There were 46 instances between 1808 and 1814 when 100 and more lashes were authorized, including six cases of 300 lashes each.

Chaplains wrote letters to influential individuals condemning use of the lash and preached sermons against its abuse until it was finally outlawed on 28 Sep 1850.

Two naval chaplains accompanied Commodore Matthew Perry on his expedition to Japan in 1853 and again in 1854. They were Chaplains Edmund C. Bittinger, aboard *Susquehanna*, and George Jones, aboard *Mississippi.*

Chaplain Bittinger, on 14 Mar 1854, decided he wanted to explore more than the coastal area of Japan where Perry had landed. To the chagrin of Commodore Perry and the dismay of the Japanese ambassador, Bittinger set off for the interior without an interpreter. Perry had to send messengers to force Bittinger to return.

Still later, when a Marine aboard *Mississippi* died, Perry requested permission of the Japanese authorities to purchase land for an American cemetery. After considerable discussion, and much reluctance, the Japanese finally consented.

Jones, as chaplain for *Mississippi* and the senior chaplain for the expedition, was responsible for the last rites. He was well aware of the old antipathy of the Japanese at that time toward christianity. Being somewhat apprehensive as to what might happen when conducting christian burial services ashore, Jones appealed to Perry for instruction. "Do exactly as you always do on such occasions," advised the commodore, "no more, no less."

With the shelling of Fort Sumter in 1861, came the beginning of the Civil War. Twenty-four chaplains were serving in the Navy at the outbreak of hostilities. One of these, Chaplain John Lenhart, was the first to die as a result of enemy action. Lenhart was on board *Cumberland* when she was rammed and sunk by the CSS *Virginia* (formerly *Merrimack*) at Hampton Roads on 8 Mar 1862. The Confederacy was likewise comprised of God-fearing men and had chaplains serving in its ships.

What can be considered the end of an era and the beginning of another for the corps occurred on 17 Jul 1862, when Congress passed "An Act for the better Government of the Navy of the United States." Article 2 of this Act, referring to Divine Service, made no mention of compulsory attendance or to daily morning and evening prayers aboard ship.

Now the burden was shifted to each individual chaplain for maintaining attendance at church. Men who entered the Navy from nonchurch homes were no longer required to attend Divine Service. It became the chaplain's duty to reach them by the persuasive power of religion projecting itself through a friendly personality. This change was in keeping with the constitutional provision of freedom of religion.

Also at this time, a growing number of Roman Catholics were joining the Navy. However, it was not until 1888 that a priest became a Navy chaplain.

One of the most effective organizations for administering to the spiritual needs of naval members at this time was the Navy Young Men's Christian Association, a branch of the National Council YMCA. The YMCA was concerned with the welfare of the men in service during the Civil War and took a leading part in the organization of the United States Christian Commission. When the Spanish-American War broke out in 1898, the "Y" again became active in administering to the men in uniform. Out of this conflict came the Navy and Army YMCA, an organization which during the next 40 years established branches in China, the Philippines, the Canal Zone, at military posts and in the leading naval port cities of the United States.

A great change took place in the attitude of Navy chaplains toward their work during the period 1901-1916. These years can be remembered as a time of reform for the corps. One by one, a number of annoying discriminations were removed either by Act of Congress or Navy Department fiat.

Along with the granting of an increase in pay, the establishment of a ratio basis to fix the quota of chaplains and the modification of certain uniform regulations, came a new policy in their selection and promotion. These combined reforms did much to elevate the dignity and improve the efficiency of the corps.

The Chaplain Corps reached full maturity during the First World War. At the outbreak of hostilities, 40 chaplains were serving on active duty. Four chaplains, while serving with the Marine Corps in France, were awarded Navy Crosses for their heroic deeds. Also at this time, the first Chief of the Chaplain Corps, John B. Frazier, was appointed.

Since the conclusion of the "war to end wars," the number of Navy chaplains has grown to where now more than 1500 active duty and Reserve chaplains serve the spiritual and moral needs of Navy members. From Iwo Jima to Khe Sanh, from the Mediterranean to the South China Seas, chaplains have upheld the highest traditions both as religious and naval leaders. In the recent Vietnamese experience, 70 per cent of all active duty Navy chaplains served in country or off-shore. Awards for heroism and dedication to duty numbered over 200. Three Navy chaplains gave their lives while fulfilling their ministry in Vietnam and one of these, Father Vincent J. Capodanno, was posthumously awarded the Medal of Honor.

Navy chaplains today come from 61 denominations which include 94 per cent of the total population in America; there are three women chaplains and several are Naval Academy graduates.

The Chaplain Corps has grown, just as the Navy has grown, since Benjamin Balch first conducted services aboard an American naval vessel. Chaplains share with other naval officers all the difficulties and compensations of seafaring life. Chaplains stand ready to promote the spiritual, religious, moral, corporate and personal well-being of personnel of the Navy, U. S. Marine Corps, U. S. Coast Guard, U. S. Merchant Marine, dependents and other authorized persons by providing the ministries appropriate to their rights and needs.

Civil Engineering Corps

During the country's infancy, the first Secretary of the Navy, Benjamin Stoddert, theorized that the building and repair of Navy ships at private yards and docks would be a continually increasing cost to the government. Accordingly, he purchased suitable land for use as Navy yards where ships could be serviced and repaired.

By the time Thomas Jefferson took office as President, Stoddert had established six Navy yards located at Portsmouth, N. H.; Charlestown, Mass.; Brooklyn, N. Y.; Philadelphia, Pa.; Norfolk, Va., and the newly established capital, Washington.

During this time of relative peace, President Jefferson wanted the 12 frigates the government owned to be placed in an enormous drydock and most of the officers and men discharged. The engineer selected to prepare plans for the drydock was Benjamin H. Latrobe, who was designated Engineer of the Navy Department in 1804.

Latrobe promptly drew up the plans, but Congress took no action.

The War of 1812 served to emphasize the importance of the shore establishment and the need for a more efficient organization of the Navy Department. The Board of Navy Commissioners was established in 1815 to advise the Secretary on technical and naval problems. This Board remained in existence for 27 years until replaced by the bureau system in 1842.

In the years preceding 1842, the Navy was busy constructing drydocks and building yards. Congress, after much prompting by President John Quincy Adams, directed that a survey and estimates for docks be made by a skillful engineer. For the drydock projects at Boston and Norfolk, the Navy chose Loammi Baldwin. His title was "superintendent of drydocks and inspector of navy yards."

Baldwin's plans for the drydocks were approved and work on them began in 1827. It soon became apparent that he spent a considerable amount of time on the road traveling between Boston and Norfolk; thus he employed a resident engineer to represent him at each yard. The man chosen to handle the Norfolk drydock was William P. S. Sanger.

After work on the Norfolk drydock was completed, Sanger was appointed civil engineer for the Board of Navy Commissioners. When the bureau system was established by Congress, he became the civil engineer authorized for the staff of the first bureau, the Bureau of Navy Yards and Docks. The head of the Board of Navy Commissioners, Captain Lewis Warrington, became the first Chief of the Bureau.

Under the Navy Department Regulation dated 26 Nov 1842, the Bureau of Navy Yards and Docks was responsible for: "The Navy Yard proper, the docks and wharves thereof; all buildings therein or appertaining thereto, including the magazine and hospital buildings; all machinery attached to the yard or ordinarily used in its operation; all vessels in ordinary; all boats, water tanks, hoys, etc., used for the purposes of the yard; all carts or other vehicles; all horses, oxen, used in the yard, and all other labour therein, and belonging to the objects of this Bureau; the police of the yard; all persons belonging to the yard or ordinary; all contracts and all accounts, returns, etc., embracing these objects or such as shall be from time to time assigned to this Bureau."

The four other bureaus established at this time were: Construction, Equipment and Repairs; Provisions and Clothing; Ordnance and Hydrography; and Medicine and Surgery.

In 1867 Congress passed a law that made the bureau's civil engineer a staff officer. This was the beginning of the Navy Civil Engineer Corps. Four years later Congress provided that civil engineers should be given such rank as the President might fix, and limited their number to 10.

The first five civil engineers to be commissioned under the Act of 1867 included W. Sanger, who was commissioned a captain. The strength of the corps remained fixed at 10 until long after the Civil War because of the lack of naval activity. At the outbreak of the Spanish-American War, the number of civil engineers was increased to 18, with a further increase to 40 on 3 Mar 1903.

At the turn of the century, one of the most famous of the Civil Engineer Corps (CEC) officers, Rear Admiral Robert E. Peary, was making his contributions to the Navy and the world. A pioneer in arctic research, Peary saw the importance of aviation and pushed for its adoption by the Navy. And he also took part in a number of surveys in Nicaragua.

Beginning in April 1907, the Bureau prepared plans and supervised the construction for the Bureau of Medicine and Surgery. The following year, the Secretary approved similar arrangements for Marine Corps construction. On 4 Mar 1911, Congress enacted a law which placed all Navy public works under the Bureau of Yards and Docks. Before that time, projects, other than those at Navy yards and certain designated stations were designed and constructed by the bureau having the cognizance of the facility.

Adopted on 29 Aug 1916, a naval act frequently referred to as the preparedness act, based enrollment in the Naval Civil Engineer Corps upon a percentage of line officers. In 1916 the total number of employees in the bureau was 63; by Armistice Day, 11 Nov 1918, the number had grown to 714.

During World War I, CEC officers constructed 24 aviation facilities in France, England and Ireland. Additionally, oil storage facilities and communication towers were erected at several locations in France. Here at home, training camps, submarine stations, aviation facilities, and permanent storage areas were constructed.

The first major expansion of the Navy after World War I was authorized by the Vinson Bill of 17 May 1938, which provided for an increase of the Navy's aircraft strength to 3000 planes and a 20 per cent increase in ship strength. This bill also directed the Secretary of the Navy to appoint a board to investigate what additional submarine, destroyer, mine and naval air bases would be needed to support the expanded fleet.

After the attack on Pearl Harbor, Admiral Ben Moreell pushed for formation of the Naval Construction Battalions, the famous Seabees. After receiving training in military matters, these military constructionmen were shipped to overseas bases where the threat of enemy action made it injudicious to send civilian contractors. Nearly 300,000 Seabees built more than 400 advance bases in the Pacific and Atlantic before the war ended.

Meanwhile, the CEC, which had numbered 125 officers before the outbreak of the war, swelled to over 10,300 during the next four years. Of these, 97 per cent were Reserves.

Since the end of World War II, CEC officers have participated in two more conflicts, Korea and Vietnam, building and maintaining bases in support of troop operations at home and overseas. With the withdrawal of United States forces from Vietnam in 1973, Civil Engineer Corps officers are heavily committed to the improvement of personnel facilities in support of the All Volunteer Navy; environmental protection; ocean engineering, and the *Trident* program.

On 1 May 1966, as a result of a Navy Department reorganization, the Bureau of Yards and Docks became the Naval Facilities Engineering Command, one of five systems commands under the Chief of Naval Material.

As we approach the second half of the 1970s, CEC officers can look back with pride on their past achievements, and with anticipation for a future even brighter than the past.

Judge Advocate General's Corps

Although the American Navy was authorized in 1775 and the Department of the Navy established by Act of Congress in 1798, the Navy had no official legal counsel until well into the 19th Century.

Following the establishment of the Navy in 1775, a committee was delegated to prepare a suitable set of regulations to govern the newly created fleet. The rules, drawn mainly from British regulations, were presented to Congress and adopted on 28 Nov 1775.

Colonial sailors fought and lived under the Articles of 1775 until the end of the Revolutionary War and the adoption of the Constitution which formed the United States of America. Under the Constitution, the affairs of the Navy and the Army were placed under the jurisdiction of the Secretary of War. However, his duties were minimal since the last surviving vessel of the Continental Navy was sold in 1785.

In 1794, Congress, faced with the plundering by the Barbary pirates against American shipping in the Mediterranean, voted the construction of six vessels. A peace treaty with the pirates sank the building program for the frigates, but trouble with France a year later led to the commissioning of three ships that are to live in American naval lore for immortality—*United States*, *Constitution* and *Constellation*.

With three ships now in service, the need for governing regulations again rose so that Congress in 1797 adopted for the Navy the earlier British-based Articles of 1775. These articles, modified from time to time to meet the demands of changing times and conditions, existed as "Articles for the Government of the Navy of the United States" until superseded in 1950 by the present Uniform Code of Military Justice.

Before the Civil War, Navy leaders were obliged to obtain legal advice from whatever sources they could. No legal office existed in the Department of the Navy. The great increase in legal work during the Civil War caused the Secretary of the Navy to seek legal aid.

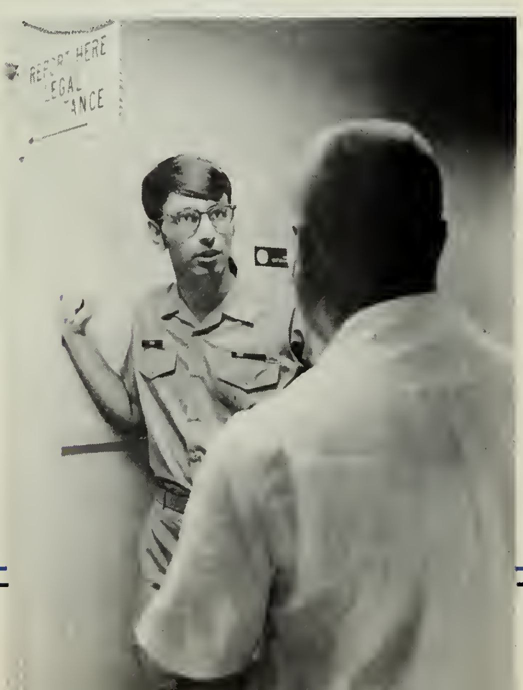
In 1864, because of contract frauds arising under Civil War naval programs. Secretary of the Navy Gideon Welles created the position of Solicitor for the Navy Department. The quickly proven value of the Solicitor's function moved Secretary Welles to request legislative ratification of the new legal office, which Congress did on 2 Mar 1865, establishing the Office of Solicitor and Naval Judge Advocate.

Later, on 8 Jun 1880, the Office of the Judge Advocate General of the Navy was established. This legislation placed upon the Judge Advocate General the duty to "receive, revise and have recorded the proceedings of all courts-martial, courts of inquiry, and boards for the examination of officers for retirement and promotion in the naval service, and to perform such other duties as have heretofore been performed by the Solicitor and Naval Judge Advocate General."

The Judge Advocate General was given cognizance over all legal matters, of whatever kind, that affected the interest of the Navy.

The first JAG was a Marine Corps captain and Civil War veteran, William B. Remey. Upon assuming the post, Remey was advanced to colonel and served for 12 years. His successor was Navy Lieutenant Samuel C. Lemly, a Naval Academy graduate who served a three-year "special duty" tour in the Navy Department. When appointed JAG, Lemly was promoted to the rank

Facing page: Seabees check building frame. Below: The legal officer assigned to your command can aid or advise you on most legal matters.



of captain and served two and one-half terms through to 1904.

The next 10 men to hold the Office of the Judge Advocate General were Naval Academy graduates who were neither law school-trained nor members of the bar.

Navy lawyers were generally line officers with legal training. Normally, they alternated tours of duty in the Office of the Judge Advocate General with line duty at sea.

In 1945 the Secretary of the Navy convened the McGuire Committee to examine court-martial procedures under the Articles for the Government of the Navy. In its report the committee formally recommended, among other things, establishment of a Judge Advocate General's Corps in which officers would perform legal duties only. Promotion in this Corps was to be predicated on professional competence in the performance of legal duties.

The committee reasoned that combining legal functions with line functions was no longer feasible in an era of increasing technical expertise.

The recommendation of the McGuire Committee for creation of a JAG Corps prompted Secretary of the Navy Forrestal to appoint a board to look further into the question. In 1946 the board reported an increased need for lawyers in the Navy, but recommended the creation of "law specialists" as a category in the restricted line as being more advantageous to the Navy than creation of a JAG Corps. In June of that year the procurement of 300 lawyers was authorized and the Law Specialist Program was implemented.

Originally, it was assumed that law specialists would supplement, not replace, line officers trained in law. The authorization for 300 law specialists was based on this assumption and upon the requirements of a Navy operating under the Articles. Four years later, in 1950, the enactment of the Uniform Code of Military Justice to replace the Articles established new requirements for legal services.

Many of the functions inherent in the court-martial system created by the Code could only be performed by law specialists and not by other officers trained in the law. It soon became apparent that a legal corps was needed to provide the professional services which could not be performed by line officers.

Late in 1967, Congress enacted Public Law 90-179, the bill establishing the JAG Corps as a staff corps of the Navy, and it was soon signed into law by the President.

After passage, all law specialists of the Regular and Reserve Navy were redesignated as judge advocates in the JAG Corps. The law also provided that, upon request, the Judge Advocate General may designate qualified Marine Corps lawyers as judge advocates, thereby entitling them to perform the same functions as a Navy judge advocate; Marine Corps officers do not, however, become members of the Navy JAG Corps by virtue of this designation.

JAG Corps officers are identified by a device comprised of two gold oak leaves curved to form a semicircle, the center of which is a balanced silver "mill rinde." (A mill rinde is the metal bar inserted between the two stones of a mill to bear and guide the upper stone equally in its course, and for centuries has been a symbol of equality and justice.)

Military justice is only one of the many areas of responsibility that are handled by Navy lawyers. JAs also are responsible for legal advice in the fields of international law, admiralty, claims, litigation, promotions and retirements, investigations, administrative law, taxation, and legal assistance to service members and their dependents.

Activity in these fields and in military justice is constantly expanding and changing. The largest change, in terms of expanded rights to military people, occurred with passage of the Military Justice Act of 1968. This act expanded the rights of the accused to include lawyer counsel before special courts-martial and inaugurated the use of military judges to preside over special courts-martial.

JAG Corps members serve in the offices of the Secretary of Defense, Secretary of the Navy, Chief of Naval Operations, Chief of Naval Material, Chief of Naval Personnel, Chief of the Bureau of Medicine and Surgery, Chief of Naval Research, Comptroller of the Navy and the Joint Chiefs of Staff, among others.

Additionally, JAs are assigned to the staffs of the commandants of the various naval districts to handle legal work generated within the district. Locally, they serve on the staffs of fleet, force and type commanders and at many naval bases, stations and schools.

Since 1969, the JAG Corps has been organized into four basic components: the Office of the Judge Advocate General, staff and activity judge advocates, law centers and a training component. Under that organizational structure, the corps experienced problems in personnel distribution, uniformity of funding and support, and standardization of operations. These problems impeded the corps' efforts to render optimum service.

Following an extensive study of the problem, the Naval Legal Service was established in 1973 with the following mission: To administer the legal services program and provide command direction for all Naval Legal Service activities and resources as may be assigned; and to perform such other functions or tasks as may be related to the Naval Legal Service as directed by the Chief of Naval Operations.

Basically, the mission of the Legal Service Offices is substantially the same as the former law centers. Headquartered in Washington, the Naval Legal Service was authorized 18 offices and 15 branch offices throughout the world. Technically, the offices serve as legal-service centers in areas of major concentrations of naval activities. Within the limits of strength authorizations, they provide a full array of legal services to commands which have no judge advocate assigned. A primary purpose of the reorganization, and the Naval Legal Service, was to bring all trial and defense counsels under the direct authority of the Judge Advocate General, thus making them independent of court-martial convening authorities.

Even though they are relatively new on the scene as an organization, the responsibilities of the Navy JAG Corps continues to expand concomitantly with the passage of legislation by Congress and the increased need for legal services by Navy members.

Dental Corps

From the inception of our Navy in 1775, until almost 70 years later, there seems to have been little concern for the requirements of naval members for dental care.

It was not until 22 Apr 1873, that the first dentist was appointed to serve as an officer in the U. S. Navy. At that time $1600 was allotted for the employment of a lone dentist at the Naval Academy. The dentist was Dr. Thomas O. Walton who served until he was honorably discharged in 1879. Dr. Walton was reappointed in 1880 to serve as a civilian contract dentist at the Academy, a position he held until 1890 when he was succeeded by Dr. Richard Grady.

In 1908 Dr. Grady presented a paper to the Northeastern Dental Association entitled "The Dentist in the United States Navy: An Account of the Efforts to Secure a Dental Corps." In this, Dr. Grady pleaded his case:

"Government ships are provided with dental cases (or kits), each containing a set of forceps, elevators, evacuators, engine burs, plastic-filling instruments, and a high grade gutta-percha. These are used by the surgeons and hospital stewards, some of whom have taken courses in dentistry. Practically there is no room on ships for dental work, for chairs, cabinet, engine, etc. If located in or near the sick bay, as the hospital is termed on a man-of-war, the dentist could work on bright days only."

Finally, in its second session, the 62nd Congress passed an act which established the Navy Dental Corps; this act was signed into law by President William H. Taft on 22 Aug 1912. The law authorized the Secretary of the Navy to appoint not more than 30 acting assistant dental surgeons.

Congress also said the total strength of the Dental Corps was not to exceed the proportion of one dentist for each 1000 members of the authorized enlisted strength of the Navy and Marine Corps. And $15,000 was appropriated for dental equipment, material and all other contingent expenses.

On 30 Oct 1912, the first dental officer went on active duty. William N. Cogan, D.D.S., was appointed acting assistant dental surgeon. One week earlier, Dr. Cogan had resigned as Dean of Georgetown University Dental School.

During World War I, Navy dentists served overseas with both naval and Marine units. One corps officer, Lieutenant (jg) Weeden E. Osborne, was posthumously awarded the Medal of Honor for gallantry while serving with the 6th Regiment, U. S. Marines, near Bouresches in France.

In 1938 the dental officer ratio was improved to admit one dentist for each 500 personnel; additional billets increased the peacetime allowance to 234 officers. During World War II, the number of dental officers on active duty rose above 7000.

Until this time, the Navy was very selective in accepting enlistees, rejecting many applicants because of poor dental health. Because of increased manpower requirements, a change in the selection policy became necessary and dental standards were virtually eliminated.

To improve management effectiveness and to achieve more efficient use of personnel and equipment, the Dental Corps began to establish naval regional dental centers in 1973. The establishment of these centers under one command permits immediate response to the needs of the specific populations and activities which they serve.

Left: Early dental office at San Diego, Calif. Below: 1920 dental office at NTC Great Lakes.

Dental Corps

Today, more than 1700 Dental Corps officers provide high-quality dental care for active duty members. Under special guidelines, military retirees and dependents are also provided dental treatment. Navy dental officers serve in more than 200 reporting dental installations in various parts of the world, including dental facilities in 76 ships. An inactive Reserve organization of over 2000 experienced officers, many with assigned mobilization billets, further supports the naval peacetime establishment.

To keep the quality of dental care high, nearly 500 dental students throughout the nation participate in one of two available Navy scholarship programs. Continuing education and specialty-training programs sponsored by the corps provide many opportunities for study and professional advancement.

Medical Service Corps

On 17 Jun 1898, an Act of Congress established a Hospital Corps, which provided for 25 warrant officers (designated Pharmacists) and enlisted men to be known as Hospital Stewards, Hospital Apprentices First Class and Hospital Apprentices.

The small cadre of warrant officers appointed under this law and subsequent amendments in 1912 and 1916, was the forerunner to the Medical Service Corps as it exists today.

During World War I, the number of warrant officers in the Hospital Corps increased significantly and 65 pharmacists and chief pharmacists were given temporary commissions in the Medical Corps. Although a few of these officers retained their temporary commissions after the war, the majority reverted to their previous warrant officer grade.

The need for an all officer category composed of individuals trained in the administrative, professional and scientific specialties traditionally allied with medicine had long been recognized. However, no positive action to establish such a category was taken before World War II.

During the war, permanent promotions were abolished and temporary appointments in the Regular Navy as warrant and chief warrant officers, and chief and first class petty officers were authorized. Under the authority of the 1941 Act, 1429 officers were given temporary appointments in the Hospital Corps during World War II.

In addition, a total of 845 pharmacists, optometrists and other individuals with training in specialties and sciences allied to medicine and dentistry were given temporary appointments as Naval Reserve officers with the H (S) specialty designator.

After the war, enactment of the Army-Navy Medical Service Corps Act in 1947 formally established the

Navy Medical Service Corps. This legislation authorized commission of a corps of specialists to complement the existing Medical Department officer categories.

The original legislation provided for the corps to be comprised of four sections: the supply and administration section; the medical allied sciences section; the optometry section; and the pharmacy section. The act further authorized the Secretary of the Navy to create such other sections, as necessary, to meet the needs of the service.

As a result of this authority, the women's specialists section was established in 1952, and in 1965 was retitled as the medical specialist section to permit the appointment of male officers in the specialties included within the section. Also as a result of the authority, a podiatry section was established in 1953. In 1969 the supply and administration section was redesignated as the health care administration section.

The Medical Service Corps contains a commissioned rank structure of ensign through captain. The corps composition is also delineated into sections. The specialties within sections are flexible and have been changed and revised by administrative actions as necessary to meet the needs of the service.

As part of the vast Navy Medical Department, the Medical Service Corps works closely with the Navy's physicians, dentists, nurses, and the Hospital Corps' enlisted staff.

Nurse Corps

Nine years before the birth of Florence Nightingale, 1811, a young Navy surgeon, Dr. William P. Barton, was commissioned by the Secretary of the Navy to submit recommendations for "conducting hospitals and institutions for the sick."

Dr. Barton wrote, "The nurses whose number should be proportionate to the extent of the hospital and number of patients, should be women of humane disposition and tender manners; active and healthy. They should be neat and cleanly in their persons; and without vices of any description . . . and are to attend with fidelity and care upon all the sick committed to their charge. . . ."

Nevertheless, it was almost 100 years later, 13 May 1908, before Dr. Barton's recommendations came about. Twice before, in 1902 and 1904, bills were introduced into Congress recommending the establishment of a Nurse Corps, but neither passed. Not until 1908 did Congress establish the Nurse Corps and authorize one superintendent and as many chief nurses, nurses and reserve nurses as necessary.

In the Civil War, women nurses (nuns of a Roman Catholic religious order), although not part of the Navy, came aboard the hospital ship *Red Rover* to serve in the Medical Department.

The next trained nurses in the Navy, though not an official unit, were a group of women employed at the Naval Hospital, Norfolk, Va., in 1898, to care for the sick and wounded of the Spanish-American War. These women neither enrolled nor enlisted, nor were they certain of being paid. A verbal agreement assured they would be reimbursed for traveling expenses and receive moderate pay if means could be found for such. They served for 50 days and were paid from a fund not appropriated by Congress.

At other various times, on recommendations of its medical officers, the Navy employed trained nurses on a contract basis to meet nursing needs at certain naval facilities.

After establishment of the corps, Esther Hasson was appointed first superintendent. By October of that year, the first 20 nurses, who later came to be called the "Sacred Twenty," reported to the U. S. Naval Hospital, Washington, D. C., for orientation and duty.

As the only women in the Navy at that time, the nurses were unique. Congressional order designated them neither as officers nor enlisted, but they were given a somewhat military status. On several occasions the decisions of the Judge Advocate General officially recognized them as members of the naval service and

Left top: Field dental office in Saipan, Mariana Islands. Left Bottom: Modern dentist's office. Below: Navy wife undergoes an opthalmological exam.

Below: Mrs. Lenah H. S. Higbee, Superintendent of Navy Nurse Corps from 1911 to 1922.

Right: The original Navy Nurses, called Sacred Twenty, in 1908. (One is missing.)

Nurse Corps

amenable to naval discipline.

With the coming of the First World War, the first great challenge to the Navy Nurse Corps was met. Navy nurses were assigned to hospitals in England, Ireland, Scotland and France. On loan to Army medical facilities, some served with field units in France. Four Navy nurses were awarded the Navy Cross for outstanding service, three of the awards being made posthumously.

After the war, the Nurse Corps advanced steadily in military and professional standing. However, the nation embarked on a program of disarmament. By 1935, under the Economy Act, the Nurse Corps had dwindled to 332 members.

In June 1938 changes to the Naval Reserve Act made the Reserve a component part of the Navy. Reserve nurses were recruited and the first appointments were made in 1939.

Some months before the Japanese attack on Pearl Harbor, American dependents of servicemen, along with other women nationals, were evacuated from most of the Pacific islands. But Navy nurses stayed at their stations at Pearl Harbor, Guam, the Philippines and aboard the hospital ship USS *Solace*.

Five nurses were captured at Guam but were repatriated after being interned in Japan for six months. Eleven nurses, taken at Canaco in the Philippines, were freed in 1945 at Los Banos, near Manila, after 37 months of imprisonment. All during their imprisonment, they cared for the sick and wounded in the internment camp.

Soon after the war, in April 1947, the Army-Navy Nurses Act established the Nurse Corps as a permanent staff corps of the Navy. This act authorized permanent commissioned rank and permitted integration of Reserves into the Regular Navy.

At the outbreak of the Korean conflict, there were 1950 Regular and Reserve Nurse Corps officers on active duty assigned to 26 naval hospitals, 67 station hospitals and dispensaries in and outside the continental United States; three hospital corps schools; two hospital ships and eight Military Sea Transport Service (now MSC) ships.

The peak census during the conflict was reached on 30 Jun 1951, when 3238 corps officers were on active duty. Three hospital ships—USS *Consolation*, *Repose* and *Haven*—rotated duty as station hospitals in Korean waters during the hostilities.

After that war, in 1957, the Navy Nurse Corps Candidate Program was established. This program allows student nurses to be enlisted into the Navy in pay grade E-3 and, upon graduation, commissioned as ensigns in the Naval Reserve.

Once again, with the outbreak of fighting in Vietnam, corps members were called into action; four received the Purple Heart for injuries sustained during a terrorist bombing attack.

Not only in war, but in peace as well, these important members of the Navy team have proven their worth. Navy nurses not only care for the sick and injured, they also teach. A large part of their time is spent giving on-the-job training to Navy corpsmen. The teaching situation also extends to the patients.

A milestone in the corps' history occurred in 1965 when the first male nurse was commissioned in the United States Navy. Since then the corps has been fully integrated.

Today, more than 2600 Nurse Corps members serve the Navy family, led by the second woman ever to be named an admiral in the Navy, Rear Admiral Maxine Conders.

Hospital Corps

The origins of the Navy Hospital Corps can be traced to the early days of the Continental Navy when Congress recognized the need to provide care for the sick and injured aboard vessels. Although Navy ships during the Revolutionary War had surgeons and surgeon's mates, the routine care of the ill often fell to untrained members of the crew known as waisters.

A waister's duty was primarily "to keep the cockpits scrupulously clean, well fumigated, and sprinkled with vinegar."

Aboard those wooden vessels, the part of the ship assigned for the care of the sick was designated as the cockpit. It was usually located in the forward end, below the waterline and sometimes enclosed by a wooden screen covered with canvas.

After the war Congress recognized the need for adequate care of the sick and injured and in 1799 passed an Act which provided that "some of the crew shall be appointed" for the specific duty of attending the "sick and hurt men" in a place of the ship set apart for that purpose.

These early corpsmen were known as "loblolly boys" because one of their duties was to carry a porridge called "loblolly" to crewmembers unable to serve themselves.

The distinction of being the Navy's first enlisted hospital corpsman belongs to John Wall. Wall joined for the specific duties of a loblolly boy, and obtained his initial experience in caring for the wounded aboard the frigate *Constellation* in her victorious encounter with a French frigate during the undeclared war against France in 1799.

In later years the term loblolly boy gave way to surgeon's stewards. The change in appellation came about because the sick-bay attendant now assumed a new degree of importance and gradually became a trained assistant to the medical officer. Duties included nursing, dispensing of medication, first aid and clerical work as his experience, knowledge and training would permit.

The advent of the Civil War brought about many significant changes in the development of the Navy and its members. Before 1861 the surgeon's steward was enlisted as a landsman or seaman, and subsequently rated surgeon's steward upon the recommendation of the medical officer. A Navy Department general order in 1861 changed this policy and elevated the status of the surgeon's steward to that of appointed petty officer, providing for direct appointment from civilian life.

By 1866 the standing of the original loblolly boys had advanced considerably. A passage in the United States Naval Regulation of 1865 said: "Surgeon's stewards to rank next after master-at-arms." The need for better trained people to assist medical officers was now more apparent and generally recognized in the services.

Late in 1866 a Navy Department order added further prestige to the burgeoning corps. This order provided substantial increases of pay, established the title of apothecary with an elevated rating structure which superseded that of surgeon's mate.

Less than three years later the decree which created the rank of apothecary was revoked and the rank was reduced to the status of petty officer.

In 1873 the apothecary rating was again modified. A new title, bayman, came into use. Recruits were enlisted as landsmen for general service and rated baymen by the commanding officer on the recommendation of the surgeon or senior medical officer. The number of baymen assigned to a vessel was predicated on the size and complement of the ship.

During the three decades from the close of the Civil War to the outbreak of hostilities with Spain, repeated but unsuccessful attempts were made to improve the standing of noncommissioned members of the Medical Department by legislation. Finally, on 17 Jun 1898, Congress passed an Act organizing the Hospital Corps of the Navy. This law created the warrant rank of pharmacist and the enlisted ratings of hospital steward, hospital apprentice first class and hospital apprentice.

Four years later the first Hospital Corps training school was established at Norfolk with the objective of providing uniform and systematic training for new entries to the Corps and service.

War clouds over Europe in 1916 impelled a program of expansion in the Navy that resulted in a reorganization of the Hospital Corps. By Act of Congress on 29 Aug 1916, the authorized strength of the Corps was firmly established, concurrent with the authorized strength of the Navy and Marine Corps.

Before this, the strength of the Hospital Corps never exceeded 1584 men. In 1917 the Corps was enlarged to 7000; by 1918 the figure had risen to over 10,600.

During the First World War, members served with distinction, earning 460 major awards and citations, including: two Medals of Honor; 55 Navy Crosses; 31 Distinguished Service Crosses, two U. S. Army Distinguished Service Medals, and 27 letters of commendation from the Secretary of the Navy.

Rapid demobilization of the Navy following World War I reduced the strength of the corps to 4000. It remained at this figure until early 1940 when, again under pressure of impending mobilization, the Corps quickly expanded to meet the needs of the service.

By the time the armistice was signed aboard the battleship USS *Missouri*, Corps members had earned 820 major awards for service, including seven Medals of Honor and 52 Navy Crosses. Also, the military order of Kuang-Hua, then China's highest honor, was awarded to a hospital corpsman. This was the first time in history this honor was bestowed on someone other than a native of China.

At the end of World War II, strength of the corps reached the all-time high of 140,000 officers and men.

Demobilization of the services again took place after the end of the war. When trouble broke out in Korea, members played a significant role in every phase of the Korean campaign. Of four Navymen awarded the Medal of Honor, three were members of the Corps.

Today, after writing another brilliant chapter in Vietnam, during which three hospital corpsmen posthumously won the Medal of Honor, the hospital corpsman is a well educated and trained specialist, a far cry from the uneducated loblolly boys who carried surgeons' instruments in our Navy's earliest days.

Corpsmen receive initial training at one of the Navy's two Hospital Corps schools, located at Great Lakes and San Diego. Following this training, they usually are assigned to a hospital where practical experience in patient care is gained.

From the Revolutionary War to Vietnam, from the cockpit to modern hospitals, corpsmen have served the Navy well.

—JO2 Marty Szostek

Facing page: Navy nurse prepares medication for patient. Below: Class instruction in U. S. Navy Hospital Corps Training School, Mare Island, Calif., in 1924. Bottom: Modern-day hospital corpsman.

INSTRUCTION IN DIETETIC
CORPS TRAINING SCHOOL ~
CAL MAY 15, 1924 ~

from the desk of the Master Chief Petty Officer of the Navy

'Setting Sail'

I feel proud!

I feel proud that I was selected from among so many well qualified candidates to serve as the new Master Chief Petty Officer of the Navy; I am anxious, and ready, to serve. As MCPON, I am proud to represent the Navy's enlisted community—my shipmates—all of whom are very special people.

I am especially proud to serve in the Navy during these Bicentennial times because our Navy has contributed so significantly to America's growth and development. I hope my shipmates throughout the fleet will share in this pride as we celebrate both the Navy's and the country's 200th birthday.

But, while having pride is important, pride alone doesn't get the job done. So, it's time to get to work.

I should make one thing clear—I work for you. Or, I should say, I will be working in your behalf. In turn, I ask each of you to do your job. Nothing more, but just do your job.

Whether you are a seaman recruit or an admiral, male or female, minority or majority, in your first term or Fleet Reserve-eligible, I will do my utmost to diligently serve your best interests and the interests of your shipmates. I will strive to maintain the dignity and worth of the individual.

As Master Chief Petty Officer of the Navy, my main concern must remain with the enlisted community. However, all of my decisions, discussions, and considerations will be predicated on what is best for the entire Navy.

I believe in our Navy, and I endorse our primary goal of fleet readiness. However, without the total support and efforts of the men and women who serve, the Navy cannot achieve this readiness. I also realize more than anyone that I cannot be an effective MCPON without your support.

In order to be an effective MCPON I have established standards for myself and my staff. The most important of these concerns communications. A great deal of emphasis is being placed on communications these days and rightly so. Communications among all levels is extremely important and is the fulcrum upon which our organization functions.

My staff and I will always strive to communicate openly and honestly with all who seek our counsel and assistance. We will do our best to keep you informed on what is happening each day, even if you don't like what you hear. I feel that Navy members are more willing to accept change if they are consistently aware of pending innovations and modifications.

In this connection, my staff and I will continue to utilize and, hopefully, strengthen the MCPOF/MCPOC chain of communications. After having served as MCPOF at COMNAVAIRLANT and MCPOC aboard USS *John F. Kennedy* (CVA 67), I fully realize the potential of this group. Open avenues of communications between MCPOCs and their respective MCPOFs and between MCPOFs and my office are instrumental in initiating innovations and improvements to Navy policies and programs.

I also intend to have an open-door policy here at

PQS Program Bolsters Command Readiness

By rights, a brand-new "A" school graduate has mastered the basics of his rating and stands ready to perform an assigned task with a certain degree of competence. During those months at school he learned enough to keep him out of hot water and, using the basic course of study as a building block, he can be shaped up in a short span of time. Yet, he's really not ready to stand a four-hour engineroom watch on his own. The question is: When will he reach that point?

A seaman apprentice fresh out of boot camp can be expected to perform most, if not all, the fundamental tasks and duties assigned him on arrival aboard his first ship. At what point, however, does he become a reliable member of one of his ship's highline transfer details?

In both these cases the "trainee" system could be employed—put the newcomer on watch or on the transfer team and let nature take her course. By repetition alone, the novice will learn to do a certain task correctly and finer points, including safety factors, are taken care of as they come up. Under this method, the time factor usually gets lost; nothing's really on schedule and everything is sort of up in the air. Sometimes it works but, for the most part, it leaves a lot to be desired.

What's really needed in both situations is a Personnel Qualification Standards (PQS) Program which brings about desired results. Sadly, not all commands have such a program in effect and even some that do have one going full force may not be achieving results for a number of reasons.

Personnel Qualifications Standards Program is an element of a well-managed unit training program for both officers and enlisted people. The Chief of Naval Education and Training funds, develops and issues PQS which have been approved for development by the Chief of Naval Operations.

the Bureau of Naval Personnel. The MCPON staff and I want to hear from and talk with our shipmates about their problems or concerning important Navy issues. I value *constructive* criticism and recognize its importance in the decision-making processes.

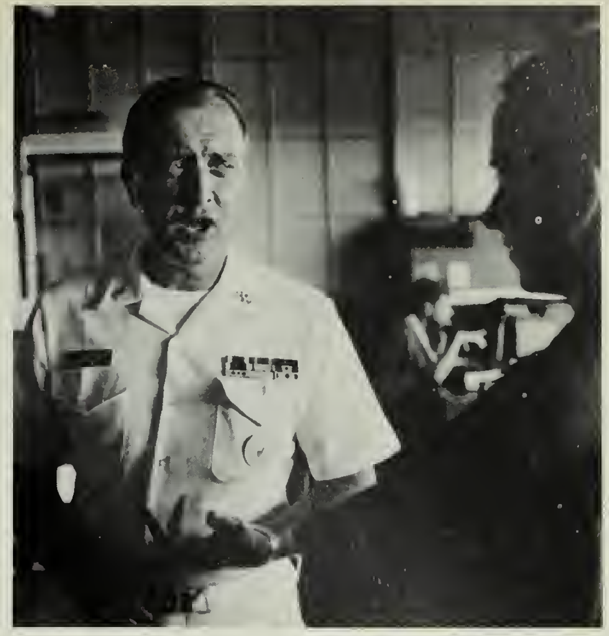
I appreciate the fact that ALL HANDS magazine provides this space each month for my article. I will utilize this space as a forum for discussion on topics of interest to Navy members and their families. Please feel free to comment on these articles either by letter or telephone. Your opinion, either favorable or unfavorable, does matter to me.

In fact, I know your opinions will assist me when I advise the CNO and CNP on those aspects of Navy life where improvements can possibly be made. I hope to make gains in such areas as the advancement system, command indoctrination programs, leadership skills for petty officers, management skills for chief petty officers, our human goals programs, and retention.

While I cannot anticipate exactly what changes will be made in the coming years, please be assured that my staff and I will always support those programs and policies which seek to improve working and living conditions for Navy enlisted personnel.

As I indicated earlier, a MCPON cannot be effective without your support. I suggest therefore that you use your MCPOC/MCPOF chain of communications to bring ideas to my attention. Additionally, I plan to travel extensively throughout the fleet on my own and at the invitation of the CNO. During these travels I hope to talk with as many of you as possible. Please try to take a minute to seek me out if I am in your area.

I want to thank my predecessor, Master Chief John D. Whittet, III, for his guidance as I prepared for my new assignment. He has left some giant footsteps to follow. While Master Chief Whittet's leadership abilities and expertise will surely be missed here, we all wish him well in his new assignment.



MCPON ROBERT J. WALKER

My wife Fran and I look forward to our stay in Washington. We believe that it will be both an exciting and stimulating period in our lives. Knowing that I will be working with and for you, my shipmates, I'm starting out confidently and eagerly. With your support and God's guidance, I hope to carry out the responsibilities of the Master Chief Petty Officer of the Navy to the very best of my abilities.

The program encompasses a standard, which is a written compilation of knowledge and skills required to qualify for a particular task. It also incorporates the requirements necessary to qualify a person to stand a particular watchstation, maintain a given piece of equipment or a system, or perform as a team member (i.e., highline detail) within the assigned unit.

A watchstation, as it applies to Personnel Qualification Standards, deals with positions normally assigned by a watchbill. These usually are of four-hour duration and, in the majority of cases, center on the operation of a certain piece of equipment or a particular system.

PQS is in the format of a qualification guide. It asks questions the trainee must answer correctly to verify his readiness to perform a given task. Most important, the program also provides a record of the trainee's progress along with final certification of the watchstander.

Through PQS, knowledgeable people do an assigned task accurately, safely, within specified time limits and without incident. The untrained and the uninformed grope around in a sea of dangerous ignorance.

A recent CNO instruction—3500.34B—lists the following causes for the failure of PQS programs in individual commands:

- Ineffective management of the overall unit training program.
- Failure to use sufficient numbers of supervisory personnel to operate the PQS program or the unit's overall training program.
- Failure to establish a program to prepare supervisors as PQS qualifiers.
- Failure to establish and maintain an adequate PQS reference library of technical, procedural and rate training manuals.
- Failure to establish individual qualification goals or time limits.
- Ineffective or nonexistent monitoring of individual qualification progress.

The Navy's PQS program continues to show positive results in qualifying people for increased watchstation responsibilities. To cite just one example: Recent Propulsion Engineering Board (PEB) inspection on 1200-PSI ships show that those ships passing the inspection the first time around are the ones which have an active PQS program in effect. Those ships failing the propulsion inspection did not have a functioning program.

The program provides personnel with a comprehensive means to qualify for certain tasks and it gives commanding officers a concrete method by which to gauge the readiness of their crews.

- NAVY PISTOL TEAM WINS NRA CHAMPIONSHIPS

The Navy "Blue" Pistol Team won the .22-caliber team match during the National Rifle Association Rifle and Pistol Championship held recently at Camp Perry, Ohio. Team members are ADCS Raymond Peet, CWO2 Robert Campbell, PR1 Joseph Witherell, RM1 William Sutton, ET1 William Boyd and CDR Jack Nichols. Also competing was the U. S. Navy Reserve Pistol Team. Members are: AG1 Donald Poorboy, ADR1 Donald Hamilton, OMC Walter Castine, AO3 Michael Kiger, AUCM Herbert Herrmann, CDR Kenneth Collier and ADJ1 Brent Larson.

In addition to the team championships, Hamilton finished third in the grand aggregate, scoring with a 2603 out of a possible 2700 points and became a Secretary of the Navy Reserve Pistol Champion. Boyd also won a Secretary of the Navy Trophy rifle as the Navy Pistol Champion.

- FOUR CARRIERS WIN FY 75 AVIATION SAFETY AWARDS

The Chief of Naval Operations recently presented the annual Admiral Flatley Memorial Awards for aviation safety for FY 75 to USS Constellation (CV 64), USS Franklin D. Roosevelt (CV 42) and USS Inchon (LPH 12). A special Admiral Flatley Award went to USS Lexington (CVT 16). CNO cited the winning crews' outstanding professionalism and emphasized the Navy's requirement for safety in carrier operations. Runners-up were USS Enterprise (CVN 65), USS Coral Sea (CV 43) and USS Iwo Jima (LPH 2).

- USS CAPODANNO TO THE RESCUE...AGAIN

For the second time in her current Med deployment, USS Capodanno (FF 1093) was called upon to rescue the crew of a vessel in distress. The most recent action came when Capodanno sailors aided the 18-man crew of a sinking Liberian freighter, SS Brilliant, about 35 miles east of Sicily. Initial offers of assistance were refused by the stricken ship because of possible danger to the Navy crew but, after continued flooding, most of the Brilliant crew were put in lifeboats. They were taken on board Capodanno and brought to Augusta, Sicily. Other Navy ships on the scene were USS Donald B. Beary (FF 1085), USS Hoist (ARS 40) and USS Stribling (DD 867). Earlier this year, Capodanno had aided an Italian family found adrift in a motorboat in the Gulf of Taranto.

- RECRUITING HONORS GO TO NAVY COUNSELOR AND SAN ANTONIO

Navy Counselor 1st Class Duane J. Witter was recently named the outstanding Navy Recruiter for 1975. Witter, in charge of the Navy Recruiting Station Chicopee, Mass., enlisted 115 men and women during FY 75. He was also cited for spending many voluntary hours in assisting other recruiting stations, and for his active role in community affairs. Witter will be meritoriously promoted to chief petty officer during special Washington, D. C., ceremonies.

In other recruiting news, Recruiting District San Antonio, Tex., was recently named the best in the Navy for FY 75. The district will receive the annual Fleet Reserve Association Awards for excellence in enlisted, officer and overall recruiting programs. This is the second consecutive year San Antonio has taken top honors in the enlisted and overall categories. The district was cited for high achievement in both quality and goal attainment.

ADDRESS CHANGES FOR ANTARCTICA POSTAL CANCELLATION SERVICES

The U. S. Naval Support Force, Antarctica, has announced that philatelists desiring canceled covers for Operation Deep Freeze 1976 should send them to the following addresses: For South Pole cachets: Philatelic Mail Clerk, South Pole Station, C/O FPO San Francisco 96692. For McMurdo Station: Philatelic Mail Clerk, McMurdo Station, U. S. Naval Support Force, Antarctica, FPO San Francisco 96692. The changes were made because the Navy relinquished operation and management control of the South Pole Station to a civilian firm last year.

1776 'DON'T TREAD ON ME' JACK TO FLY DURING BICENTENNIAL

The Secretary of the Navy recently directed that all Navy ships are to fly the first Navy Jack instead of the Union Jack during the period Navy's 200th birthday, 13 Oct 1975, until 31 Dec 1976. The Navy Jack consists of 13 horizontal alternating red and white stripes, a rattlesnake and the motto, "Don't Tread On Me." A special distribution of the flag is being made to all ships. Use of the Jack on modern Navy ships will serve as a reminder of the Navy's origin and its will to survive and triumph.

5TH VIRGINIA CG; 8TH SPRUANCE DD LAUNCHED

USS Texas (CGN 39), the fifth nuclear-powered Virginia-class guided missile cruiser, was recently launched in Newport News, Va. The 585-foot ship carries a crew of 500 and equipped with advanced ASW, AAW, guided missile and electronic warfare systems.

On the same day, USS Caron (DD 970), the eighth Spruance-class destroyer, was launched in Pascagoula, Miss. The ship is named for HM3 Wayne M. Caron who was posthumously awarded the Medal of Honor for service in Vietnam. Caron is 563 feet long, carries a crew of 270 and is powered by four gas turbine engines.

In addition, USS Richard B. Russell (SSN 687), Navy's 106th nuclear submarine, was recently commissioned at Newport News. The Sturgeon-class attack sub is named for the late Georgia Congressman who served in the Senate for 38 years.

TRIALS COMPLETED BY FIRST SHIPS OF NEW LHA AND PHM CLASSES

Tarawa, first of the Navy's new amphibious assault ships (LHA), successfully completed her initial sea trials recently in the Gulf of Mexico. The trials tested the ship's four steam turbines. Her maneuvering and seakeeping qualities were considered excellent and her propulsion plant operation up to full power was satisfactory. Tarawa's next test will be builder's trials scheduled for late this month. Acceptance trials by the Navy's InSurv Board are scheduled for mid-November, and the ship is due to be delivered to the Navy in early 1976.

On the West Coast, Pegasus (PHM 1), lead ship of the new patrol combatant missile (hydrofoil) class, recently completed initial builder's trials in Puget Sound. Structural firing tests of her new 76mm gun were successful. Further gun testing and prototype firings of her Harpoon missiles will be conducted later this year. Technical and operational evaluations were also made, and Pegasus is scheduled to be delivered to the Navy in early 1976.

CHRONOLOGY OF THE SEA SERVICE

1960 to the PRESENT

This sixth and final section of the Chronology of the Sea Service begins with 1960 and carries through to the present. These years proved to be among the busiest in the recent history of the naval service. The chronology opens with the isolation of the naval base at Guantanamo Bay in Cuba, the beginning of the manned space program in which the Navy played a large part, and America's troop involvement in Southeast Asia. These were the years to test the fortitude and stamina of the sea service and the years, too, which gave birth to yet a newer Navy—one which would be called the Now Navy—made up of vibrant young men and women on the move all over the globe. There was the confrontation with Russia when it was discovered that the Soviets planned to install nuclear missile bases in Cuba, and a naval blockade was established to prevent their installation.

The war in South Vietnam, of course, occupied much of the effort of the nation as a whole and the United States Navy acquitted itself with honor during that long and gallant struggle. There was trauma, too, as has been the case in all our conflicts. *Mercury*, *Gemini*, *Apollo* and Skylab became common names as the nation's space program culminated with the first landing by man upon the moon on 20 Jul 1969 by astronaut Neil Armstrong, a former Navy pilot.

With the conclusion of the war in South Vietnam the Navy turned more heavily to its peacetime programs in science and research. With the deactivation of many overage ships, the emphasis was placed upon a smaller but finer Navy. Out of wartime research and development came the newer and faster ships designed for specific tasks such as the nuclear guided missile cruisers, fast new frigates, gunboats, hydrofoils, surface effect ships and the *Trident* submarine. When the scaling down was complete, the Navy entered yet another phase with the reclassification of its ships better to describe their modern roles upon the high seas. As the Navy entered its third century, a Navy ship achieved a record, moving in excess of 80 knots—and the possibility of a 100-knot ship did not seem far away.

This section, then, completes the Chronology of the Sea Service which ALL HANDS began with the January 1973 issue and the initial entry: "12 Jun 1775—Jeremiah O'Brien, with a sloop and a party of Maine woodsmen, took the British cutter *Margaretta* off Machias, Maine."

Those Maine woodsmen started something that's still going strong.

1960

7 Jan—First inertially guided *Polaris* test vehicle is launched successfully at Cape Canaveral, Fla.

23 Jan—LT Don Walsh and scientist Jacques Piccard reach a depth of 35,800 feet below sea level in Marianas Trench in bathyscaph *Trieste.*

9 Feb—USS *Sargo* (SSN 583) surfaces at North Pole. She goes on to complete a 6000-mile east-to-west voyage across the North Pole, under the polar ice cap, arriving at Hawaii on 1 Mar.

13 Apr—The Navy places the first of four planned *Transit* navigation satellites in orbit from Cape Canaveral. This project is designed to enable ships and planes to determine their positions to within one-fourth mile or less from anywhere on earth.

19 Apr—The Navy's first operational space organization, the U. S. Naval Space Surveillance Facility is established; its mission is to detect space vehicles.

26 Apr—USS *George Washington* (SSBN 598) conducts a test firing of the *Polaris* missile in Long Island Sound. Attempts by a Soviet trawler to retrieve the missile are thwarted by USS *Nipmuk* (ATF 157) which moves between missile and trawler until recovery.

6 May—Cuban cutter *Oriente* fires on U. S. submarine *Sea Poacher* (SS 406) in San Nicholas Channel.

10 May—USS *Triton* (SSN 586) surfaces after having traveled around the earth submerged. Following the same general route taken by Magellan, the submarine had traveled 41,519 miles in 84 days.

21 May—First carrier to be armed with guided missiles, *Kitty Hawk*, is launched at Camden, N. J.

4 Jun—The U. S. accuses Cuba of conducting an intense official campaign of slander against the U. S.

29 Jun—Cuba seizes oil refineries owned by U. S. companies.

20 Jul—A *Polaris* missile is successfully launched from underwater for the first time from USS *George Washington* (SSBN 598).

11 Aug—The first U. S. recovery of an object which had been in orbit is made by USNS *Haiti Victory* (T-AK 238) when a UDT Navyman who had dived from a helicopter retrieves a capsule from the satellite *Discoverer XIII.*

24 Sep—World's first nuclear-powered aircraft carrier, USS *Enterprise* (CVAN 65) is launched at Newport News, Va.

14 Oct—U. S. presents to the United Nations a document charging the Cuban regime with deliberate sabotage of U. S.-Cuba relations.

20 Oct—U. S. announces an embargo on all exports to Cuba except medical supplies and food.

15 Nov—USS *George Washington* sails on her first *Polaris* patrol.

17 Nov—U. S. naval units are ordered by the President to patrol Central American waters to bar any attack on Guatemala or Nicaragua by Cuba.

1961

9 Jan—Following end of U. S.-Cuban diplomatic relations on 3 Jan, State Department announces Naval Base at Guantanamo Bay, Cuba, is not affected, and will continue to operate under provisions of treaties of 1903 and 1934.

16 Jan—The National Oceanographic Data Center is set up at Washington, D. C., under direction of Navy Hydrographer.

20 Jan—*Asroc* antisubmarine weapon becomes operational with firing from USS *Mahan* (DLG 11).

21 Jan—USS *George Washington* (SSBN 598), first *Polaris* submarine, completes successful first operational cruise.,

31 Jan—Patrol Squadron 18 picks up a chimpanzee that had made a 420-mile space flight from Cape Canaveral into the Caribbean and places it aboard USS *Donner* (LSD 20) for return to Canaveral.

1 Feb—At the Naval Weapons Laboratory, Dahlgren, Va., the Navy's Space Surveillance System is commissioned.

3 Mar—CDR Walter Mazzone and LT Harris Steinke set new depth record—318 feet in 55 seconds—for escape from submerged submarine off Key West, Fla.

3 Apr—USS *Franklin D. Roosevelt* (CVA 42) makes first telecast from Navy carrier to another ship in area.

15 Apr—USS *Bainbridge* (DLGN 25), first nuclear-powered frigate, is launched at Quincy, Mass.

4 May—CDR Malcolm Ross and LCDR Victor G. Prather reach height of 113,500 feet in balloon.

5 May—CDR Alan B. Shepard, Jr., becomes America's first man in space, completing sub-orbital flight above Atlantic—116.5 miles into space and 302 miles down range. USS *Lake Champlain* (CVS 39) recovers.

8 May—Navy celebrates 50th anniversary of naval aviation.

23 Jun—Major low frequency facility, Naval Radio Station, Cutler, Maine, is commissioned.

30 Jun—At close of fiscal 1961, 819 Navy ships were in commission.

25 Jul—President calls for increases in personnel, ships and aircraft as a result of mounting Berlin situation.

12 Aug—Berlin Wall is begun by East Germans to stop exodus from the city to the West, as East-West tension mounts.

14 Aug—Navy extends active duty tours by six months because of situation in Berlin.

25 Aug—Navy calls 6400 Reservists to active duty to man 40 Reserve destroyers and 18 antisubmarine aircraft squadrons during period of Berlin crisis.

9 Sep—Navy commissions world's first nuclear-powered cruiser, USS *Long Beach* (CGN 9), at Boston.

23 Oct—Navy fires first *Polaris* A-2 missile from submerged submarine, USS *Ethan Allen* (SSBN 608).

27 Oct—First successful firing of *Saturn* missile at Cape Canaveral.

25 Nov—USS *Enterprise* (CVAN 65) is commissioned at Newport News, Va.

29 Nov—Chimpanzee Enos is retrieved by destroyer USS *Stormes* (DD 780) from waters off Bermuda after two-orbit *Mercury* flight.

30 Nov—Navy ends its lighter-than-air program.

5 Dec—Armed Forces Expeditionary Medal is created.

14 Dec—Navy's prefabricated nuclear power plant arrives at McMurdo Sound in Antarctica aboard USS *Ameb* (AKA 56).

15 Dec—First shore-to-ship message via the moon made by Radio Laboratory at Stump Neck, Md. Message picked up by USS *Oxford* (AG 159) off east coast.

1962

1 Jan—Navy establishes SEAL teams (SEaAirLand capability).

17 Jan—An F-8U *Crusader* becomes first aircraft to operate from *Enterprise* (CVAN 65).

6 Feb—Nuclear-powered weather station is installed on Ross Sea Ice Shelf in Antarctic.

8 Feb—Establishment of Military Assistance Command in Vietnam.

15 Feb—UN rejects Cuba's charge that the U. S. was planning to attack Cuba.

20 Feb—Marine Lt. Col John H. Glenn becomes first American to complete full orbit in space in Project *Mercury's* capsule *Friendship. Noa* (DD 841 recovers.)

1 Mar—Antarctic nuclear plant goes "critical."

11 Mar—USS *Constellation* (CVA 64) becomes first carrier to fire missiles, launching four *Terriers* and scoring four hits against a drone target traveling at speeds up to 400 mph.

17 Mar—USS *Raleigh* (LPD 1), first amphibious transport dock ship, launched in New York.

1 Apr—Atlantic Fleet Destroyer Force and Cruiser Force Atlantic Fleet are combined.

12 Apr—Navy demonstrates new landing craft with retractable hydrofoils.

14 Apr—Message sent around the world from USS *Northampton* (CC 1) is received by another teletype in the cruiser in eight-tenths of a second.

10 May—With both missiles traveling at supersonic speeds, a *Sparrow III* rocket fired from an F-4H-1 scores a direct hit on a *Regulus III* missile.

16 May—*Point Defiance* (LSD 31), *Navarro* (APA 215) and *Valley Forge* (LPH 8) land U. S. Marines in Thailand as situation in Laos worsens

24 May—LCDR M. Scott Carpenter is launched into orbit on second U. S. manned orbital flight for three orbits in *Aurora* 7. USS *Intrepid* (CVS 11) carries out the recovery mission.

1 Aug—Naval Reservists recalled as a result of Berlin crisis are released.

2 Aug—Submarines USS *Skate* (SSN 578) and *Sea Dragon* (SSN 584) surface at North Pole and their crews meet on ice.

17 Aug—Navy's first hydrofoil patrol craft, *High Point* (PCH 1) is launched at Seattle, Wash.

17 Sep—U. S. space program is augmented by nine more astronauts, including three naval aviators, LCDRs James A. Lovell, Jr., and John W. Young, and LT Charles Conrad, Jr.

3 Oct—CDR Walter M. Schirra is launched into orbit in *Sigma 7* for six orbits of earth. USS *Kearsage* (CVS 33) recovers.

22 Oct—A Soviet offensive buildup of missile bases in Cuba is revealed by President Kennedy who announces that the United States is establishing a naval quarantine of Cuba to prohibit entry of Russian offensive weapons; 390 dependents are air-evacuated from Guantanamo Bay, Cuba, another 2800 dependents evacuated by naval transports.

24 Oct—Navy establishes surface quarantine force across sea-lanes leading to Cuba. In following days, Marines are deployed to Guantanamo by air and the entire Navy is on alert, with most units deployed from port. A total of 183 U. S. Navy ships steam more than a million miles in carrying out the quarantine.

26 Oct—Navy stops Soviet tanker *Bucharest* heading for Cuba. Tanker allowed to proceed by USS *Gearing* (DD 710).

26 Oct—USS *Joseph P. Kennedy, Jr.* (DD 850) and *John R. Pierce* (DD 753) intercept and board Lebanese-flag freighter under Soviet charter 180 miles northeast of Nassau. Freighter is allowed to continue.

7 Nov—U. S. and Russia agree that U. S. Navy ships would check Soviet ships at sea and count missiles removed from Cuba.

8 Nov—DOD states that all known offensive missile bases in Cuba have been dismantled.

20 Nov—The President orders end to naval quarantine of Cuba; Russia agrees to withdraw all Soviet jet bombers from Cuba within 30 days.

1 Dec—Navy establishes U. S. Naval Air Base, 10th Naval District, with headquarters at San Juan, P. R.

1963

10 Apr—USS *Thresher* (SSN 593) is sunk 220 miles east of Cape Cod with 129 aboard.

24 Apr—Deep Submergence Systems Review Group established by the Secretary of the Navy.

15 May—Carrier USS *Kearsarge* (CVS 33) recovers astronaut Gordon Cooper from *Faith 7* capsule after he had completed 22 orbits around the earth.

8 Jun—Naval Aviation Museum is opened at NAS Pensacola.

30 Aug—First nonstop flight across the South Pole is completed by a Navy C-130 aircraft with Admiral George Reedy commanding. The flight began at Capetown, South Africa, and ended at McMurdo.

18 Oct—Five naval aviators are among those chosen for *Gemini* earth orbit.

10 Nov—USS *Rehoboth* arrives at Nakhodka, Siberia, the first U. S. ship to visit a Russian Pacific port in 20 years.

2 Dec—Navy bureaus, other than Bureau of Naval Personnel and Bureau of Medicine and Surgery are placed under the new Naval Material Support Establishment.

4 Dec—Navy announces details of *Subroc*, a new ASW weapon undergoing tests.

1964

6 Jan—Naval Supply Center, Charleston, S. C., is commissioned.

19 Jan—Navy Preventive Medicine Unit 2 sends a six-man team to Saigon, Vietnam, at the request of the government to help contain an epidemic of cholera, and is successful in preventing spread of the disease.

31 Jan—First nuclear-powered, deep-sea-anchored, unmanned weather station is placed in operation in the Gulf of Mexico.

6 Feb—Cuba cuts off freshwater supply to U. S. Naval Base at Guantanamo Bay.

10 Feb—Defense Department announces that a desalinization plant would be installed at Guantanamo Bay. In the meantime, fresh water is supplied to the base by tanker shuttle operated by Military Sea Transportation Service.

25 Mar—Navy's oldest ship, USS *Constitution* (IX 21), returns to berth at Boston, Mass., following major overhaul.

4 Apr—*Concord Squadron* enters Indian Ocean to begin a six-week cruise.

13 May—USS *Enterprise* (CVAN 65), *Long Beach* (CGN 9) and *Bainbridge* (DLGN 25) become world's first surface nuclear-powered task group.

26 Jun—An LC-130 transport of Air Development

Squadron Six makes unprecedented midwinter penetration of Antarctica to evacuate an injured Navyman.

20 Jul—Four U. S. Navy divers begin a 20-day live-in 192 feet beneath the ocean's surface in the Project Sealab I capsule. Threatening weather ends the experiment after 11 days.

22 Jul—Contracts for construction of 26 ASW destroyer escorts are awarded. The new class will carry variable-depth sonar, *Asroc*, DASH and ASW torpedo launchers.

Facing page top: USS Seadragon (SSN 584) foreground, prepares to moor at the North Pole after historic rendezvous with USS Skate (SSN 578). Left: Oceanographic survey ship USS Rehoboth shown underway in 1963. Above: First nuclear fleet in formation; USS Enterprise (CVAN 65), USS Long Beach (CGN 9), and USS Bainbridge (CGN 25).

31 Jul—Task Force One, first surface nuclear-powered task group, begins an around-the-world unreplenished cruise known as Operation Sea Orbit. The three participating ships are USS *Enterprise* (CVAN 65), *Long Beach* (CGN 9), and *Bainbridge* (DLGN 25).

2 Aug—In international waters in the Gulf of Tonkin about 30 miles off the coast of North Vietnam, U. S. Navy destroyer USS *Maddox* (DD 731) is attacked by three North Vietnamese patrol boats. *Maddox* avoids the torpedo attack and sinks one of the attacking patrol boats.

5 Aug—USS *Maddox* (DD 731) is attacked for the second time by a squadron of North Vietnamese high-speed patrol boats, in international waters in the Gulf of Tonkin, more than 60 miles off the coast. USS *Turner Joy* (DD 951), cruising with *Maddox*, is also brought under attack. Two torpedo boats are sunk and others are damaged. In response to the attack, under orders from President Johnson, aircraft from USS *Constellation* (CVA 64) and *Ticonderoga* (CVA 14) conduct 64 sorties against target areas on the coast of North Vietnam, including coastal bases, patrol boats and oil depots.

31 Aug—Naval Oceanographic-Meteorological Automatic Device (NOMAD) buoy is moored 210 miles off the Coast of South Carolina by the U. S. Oceanographic Office, first such device capable of relaying both meteorological and oceanographic data to shore stations.

11 Sep—*Polaris* missile assembly facility for Pacific is commissioned at Bangor, Wash.

18 Sep—In Gulf of Tonkin, destroyers USS *Morton* (DD 948) and *Richard S. Edwards* (DD 950) fire on four radar contacts believed to be fast torpedo craft making a nighttime attack on them.

21 Sep—Twenty-seven U. S. warships and 10 U. S. merchant ships join other NATO navies in Operation Teamwork; exercise is largest in NATO's history.

1 Oct—Navy announces finding of wreckage of *Thresher* (SSN 593), lost with her crew on 10 Apr 1963; wreckage located by deep-diving vehicle *Trieste II*.

3 Oct—Sixty-four-day, around-the-world Sea Orbit is successfully completed when USS *Enterprise* (CVAN 65) and *Long Beach* (CGN 9) arrive in Norfolk, and *Bainbridge* (DLGN 25) arrives in Charleston, S. C.

1 Nov—Bien Hoa air base in Republic of Vietnam is attacked by Viet Cong, causing 72 American casualties and damaging or destroying 28 U. S. aircraft.

18 Nov—The Assistant Secretary of the Navy for Research and Development announces the Navy's intention to give antisubmarine warfare program a priority second only to the *Polaris* program.

6 Dec—Navy's base at Guantanamo Bay becomes independent of outside water sources when the last of its three saltwater conversion plants becomes operational.

25 Dec—USS *Bennington* (CVS 20) arrives at Eureka, Calif., to begin relief work because of heavy snow, rain and floods in northern part of the state.

1965

1 Jan—Naval District Washington, D. C., is established; combines functions of Potomac and Severn River Naval Commands.

7 Feb—Aircraft from carriers USS *Coral Sea* (CVA 34), *Hancock* (CVA 19) and *Ranger* (CVA 61) strike against North Vietnamese barracks and staging areas near Donghoi. This is followed by strikes from more than 100 Navy aircraft on 11 Feb, and continued strikes against North Vietnamese positions in ensuing months. This was the first nonretaliation air strike.

8 Mar—The 9th Marine Expeditionary Brigade is ordered by the President to defend the Da Nang airbase; first of 3500 Marines land on beach nearby.

23 Mar—First successful orbit of two-man *Gemini* capsule is made by LCDR John Young and LCOL Virgil Grissom. USS *Intrepid* (CVS 11) recovers.

3 Apr—During an air strike against Dong Phoung highway bridge, *Mig* jet fighters are spotted, but present no opposition. Throughout April, May and June, carrier crews work 15 to 18 hours a day.

8 Apr—The President, in a nationwide speech, expresses willingness of the U. S. to enter into diplomatic discussions to end the war in Vietnam.

10 Apr—The 2nd Battalion, Third Marines, begins landing near Da Nang to assist in protection of the air base at the request of South Vietnam.

27 Apr—Dominican Republic is scene of widespread fighting and USS *Boxer* (LPH 4), *Raleigh* (LPD 4), *Fort Snelling* (LSD 30), *Wood County* (LST 1178), *Ruchamkin* (APD 89), and *Rankin* (AKA 103) evacuate more than 4300, including 2694 U. S. citizens.

28 Apr—A 400-man expeditionary force of Marines is dispatched to the Dominican Republic in order to protect the lives and property of U. S. citizens who were there during military revolt. By the end of May, more than 40 U. S. Navy ships and 11,000 troops would be directed to the Santo Domingo area.

29 Apr—Coast Guard Squadron One is formed and assigned duty in Vietnam, first Coast Guard unit assigned combat duty since Korean conflict.

3 May—First U. S. Army combat unit is committed to the Vietnamese war as members from the 173rd Airborne Brigade arrive in Saigon.

7 May—Upon drifting into the waters of the North Atlantic, ARLIS II, the Navy's arctic ice island research station, is evacuated by USS *Edisto* (AGB 2) after a four-year, 5000-mile journey through the Arctic Ocean.

20 May—Seventh Fleet destroyers begin shore bombardment off coast of South Vietnam.

7 Jun—*Gemini* 4 astronauts are recovered by helicopter and flown to USS *Wasp* (CVS 18) after their record-breaking, 62-orbit voyage in a space capsule.

17 Jun—Using air-to-air missiles, Navy F-4 *Phantoms* from USS *Midway* (CVA 41) down two *Mig* 17 aircraft; first confirmed *Mig* casualties since action over North Vietnam began.

1 Jul—Oceanographic Air Survey Unit is formed; first aviation unit designated specifically for oceanographic work.

7 Jul—Eight thousand Marines begin to land in the Republic of Vietnam, bringing the Marine force stationed there to 25,000.

13 Jul—First full-sized Army infantry unit arrives in Vietnam aboard USNS *General W. H. Gordon* (T-AP 117). Soviet agreement to reconvene 18-nation disarmament conference is disclosed by President.

14 Jul—*Mariner IV* space vehicle sends back to earth first TV relay photographs of planet Mars.

20 Jul—Navy's deep-diving vehicle, *Alvin*, is successfully tested at 6000 feet for 20 minutes.

29 Jul—Plans to bring the active duty force to three million are announced, the highest in 10 years.

8 Aug—Plans for a seventh research station in the Antarctic are announced by Navy.

16 Aug—Contracts for three naval air-cushion, ground-effects vehicles are awarded by the Department of Defense; first purchase of air-cushion vehicles by any of the armed forces.

19 Aug—Reactivation of 21 ships and 13 landing craft is announced by Department of Defense.

25 Aug—First male joins Nurse Corps under new Navy program.

26 Aug—Last North Atlantic barrier patrol is flown by Airborne Early Warning Squadron 11, made obsolete by advanced technology.

28 Aug—Entering the Sealab II capsule 205 feet beneath the surface of the ocean, 10 aquanauts (including astronaut CDR Scott Carpenter) begin Navy's latest experiment in underwater living and working.

29 Aug—*Gemini V* astronauts are recovered by Navy helicopter and transferred to USS *Lake Champlain* (CVS 39) within 45 minutes of splashing down after a record eight-day space flight.

12 Sep—USS *Boxer* (LPH 4) begins to deliver the U. S. First Cavalry Division (Airmobile) at Quinhon, Republic of Vietnam.

6 Oct—A Vietnamese Service Medal is authorized by Department of Defense.

9 Oct—First contingent of Republic of Korea 15,000-man unit arrives in Republic of Vietnam on board USNS *General Leroy Eltinge* (T-AP 154).

22 Oct—Loan or sale of Reserve Fleet combat ships to certain foreign navies approved by Congress.

28 Oct—The first Mark 46 underwater guided missile (torpedo) is received by the Navy. A new class of small, fast patrol craft (PCF) to be used in Vietnam is revealed by the Secretary of the Navy.

13 Nov—Two naval officers are among those selected for manned orbiting laboratory experiments scheduled to begin in 1968.

18 Nov—DOD reports that 1095 U. S. servicemen have died as a result of combat in Vietnam.

2 Dec—USS *Enterprise* (CVAN 65) becomes history's first nuclear-powered ship in combat as she operates off North Vietnam.

4 Dec—*Gemini VII* is launched for orbital mission in which she would rendezvous with astronauts from *Gemini VI* on 15 December. Both capsules are later recovered by USS *Wasp* (CVS 18), *Gemini VI* on 16 December and *Gemini VII* on 18 December.

15 Dec—*Gemini VI* and *VII* meet in space and maneuver around each other for five hours.

18 Dec—River Patrol Force is activated in Republic of Vietnam; called Operation Game Warden by Navy.

1966

1 Jan—The Military Air Transport Service (MATS) takes on new name of Military Airlift Command.

5 Jan—Casualty figures for 1965 include 1365 American servicemen killed in combat in Vietnam.

20 Jan—Search begins off Palomares, Spain, for missing nuclear weapon.

2 Feb—A third school for recruit training, to be located at Orlando, Fla., is announced by the Navy.

20 Feb—Two-day test by Navy of nuclear-powered, saltwater distillation plant at McMurdo Station, Antarctica, is successful.

7 Mar—Reorganization of the Navy Department is announced. As of 1 May, the Naval Material Command, Bureau of Naval Personnel, and Bureau of Medicine and Surgery are to be under the direct command of the CNO. All other bureaus placed under Office of Naval Material Command.

15 Mar—*Alvin* locates the weapon lost off Palomares 2500 feet beneath the surface.

17 Mar—USS *Leonard F. Mason* (DD 852) makes successful emergency recovery of *Gemini VIII* astronauts in Pacific.

20 Mar—Republic of Korea doubles its troop commitment in Vietnam.

29 Mar—ENS Gale Ann Gordon, MSC, undergoing flight training as part of instruction in aviation experimental psychology, is the first woman in the history of Naval Air Basic Training Command to fly solo.

5 Apr—A recommendation to study suitability of surface effect ships (hovercraft) for use in ocean commerce is submitted by a government panel.

7 Apr—A nuclear weapon lost off the coast of Palomares, Spain, is recovered by the Navy.

14 Apr—Navy commissions Undersea Test and Evaluation Center in Bahamas to experiment with new means of finding and destroying submarines.

17 Apr—USS *Canberra* (CAG 2) uses *Syncom III* satellite to relay message; is first Navy ship to perform this operation.

1 May—Reorganization of the Navy Department becomes effective.

9 May—Air-cushion patrol vehicles, capable of speeds in excess of 50 knots, join coastal surveillance force in the Republic of Vietnam for first time.

18 May—Vertical/short take-off/landing (VSTOL) is successfully tested from USS *Bennington* (CVS 20).

1 Jun—*Surveyor*, a moon vehicle, successfully lands on moon and sends back photographs.

6 Jun—*Gemini IX* space mission astronauts are safely recovered by the carrier, USS *Wasp* (CVS 18). During the flight, Lieutenant Cernan walked in space, the second U. S. astronaut to do so.

21 Jul—*Gemini X* astronauts are recovered by USS *Guadalcanal* (LPH 7).

1 Aug—Contracts are awarded for construction of submersibles with a 6500-foot depth capability. They are designated as *Autec I* and *Alvin II*.

29 Aug—Navy discloses formation of a new oceanography office to be responsible, under direction of the Oceanographer of the Navy, for deep-sea studies.

1 Sep—Facilities for Man-in-the-Sea Program are opened at Deep Submergence Systems Office, San Diego.

5 Sep—Additional Republic of Korea troops arrive in the Republic of Vietnam, making a total of 46,000.

15 Sep—*Gemini XI* astronauts are recovered by USS *Guam* (LPH 9) 700 miles southeast of Cape Canaveral. (*Note*: Called Cape Kennedy in 1966.)

16 Sep—First contingent of troops from the Republic of the Philippines arrives in South Vietnam.

23 Sep—Plans to develop amphibious ships, to be designated LHA, that will carry helicopters as well as landing craft, are announced by Navy.

29 Sep—Relief operations are begun in the Dominican Republic and Haiti by five Atlantic Fleet amphibious ships. Hurricane Inez had done extensive damage to both countries.

21 Oct—Development of a helicopter radar system under direction of Office of Naval Research is announced. It is expected to alter drastically the night and foggy weather flying potential of helicopters.

4 Nov—A series of simulated deep-ocean dives conducted by U. S. Navy Experimental Diving Unit begins and is expected to provide basis for training of Sealab III aquanauts.

10 Nov—USS *Nautilus* (SSN 571) and USS *Essex* (CVS 9) collide during an exercise off the coast of North Carolina; both sustain only minor damages.

13 Nov—Air Force jet C-141 safely completes a 2300-mile flight to McMurdo, Antarctica, from Christchurch, N. Z.; first jet to land in Antarctica.

15 Nov—Last flight of the series, *Gemini XII* is recovered from Atlantic by USS *Wasp* (CVS 18).

21 Nov—An All-Weather Carrier Landing System (ACLS) is demonstrated on USS *America* (CVA 66); system is designed to allow pilots to make "hands-off" landings.

13 Dec—Headquarters, Atlantic Undersea Test and Evaluation Range, is to be established at West Palm Beach, Fla., according to Navy announcement.

31 Dec—A fire aboard SS *Oriana* in Kaohsiung, Taiwan, is extinguished by 12 volunteers from the crew of USS *Perkins* (DD 877).

1967

13 Jan—Master Chief Gunner's Mate Delbert D. Black is named the Navy's first Senior Enlisted Advisor (later changed to Master Chief Petty Officer of the Navy—the highest enlisted post in the Navy.

27 Jan—Flash fire aboard *Apollo I* spacecraft kills astronauts LCDR Roger B. Chaffee and LCOLs Virgil Grissom and Edward H. White, both USAF.

4 Feb—In protest of South Africa's apartheid policy, *Franklin D. Roosevelt* (CVA 42) cancels shore leaves for her 3800 officers and enlisted men while docked at Cape Town.

10 Feb—LT Elizabeth Wylie is the first U. S. Navywoman to be assigned in Vietnam.

28 Feb—Naval Research Laboratory, Washington, D. C., dedicates new $5 million nuclear physics research and sector-focusing cyclotron.

20 Mar—Establishment of the Naval Development and Training Center, San Diego, Calif., to train enlisted men, is announced.

31 Mar—The David Taylor Model Basin and the Navy Marine Engineering Laboratory are consolidated into one command called the Naval Ship Research and Development Center.

13 Apr—Six U. S. companies are asked for proposal for development, design and construction of a deep submergence search vehicle. Requirements are for a vehicle that can descend to and work for 30 hours at 20,000-foot depths and have a four-man crew.

29 Apr—USS *Decatur* (DDG 31), the first post-WW II destroyer to be converted to a guided missile destroyer, is recommissioned in Boston, Mass.

8 May—Navy announces that by 1 Aug women Navy Nurse Corps officers will be assigned to Station Hospital, Da Nang, South Vietnam.

19 May—Two A-7A *Corsair II* Navy jets make first single jet flight across Atlantic without refueling.

5 Jun—Israel and Egypt begin seven-day war.

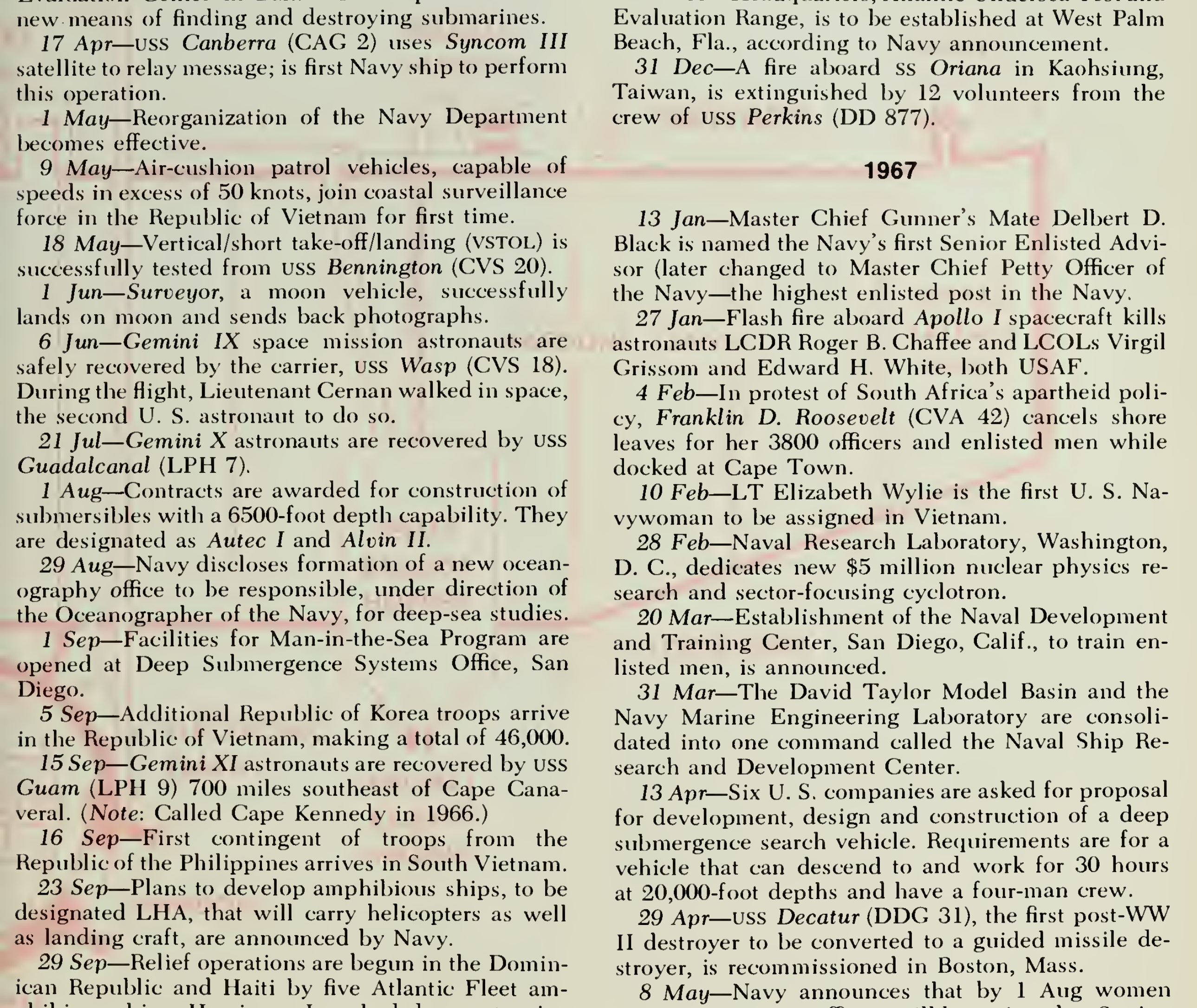


Diagram of bathyscaph

8 Jun—USS *Liberty* (AGTR 5), while in international waters, is mistakenly attacked by Israeli jet fighters and torpedo boats, with 34 of her crew killed and 75 more injured. Israel apologizes for the attack.

27 Jun—Defense Department announces establishment of new Naval Communications Command following a major reorganization of the Office of Naval Communications.

15 Jul—*Tucumcari*, (PGH 2), a hydrofoil gunboat, is launched at Seattle.

26 Jul—For the first time since her commissioning in 1955, USS *Forrestal* (CVA 59) launches aircraft under combat conditions, against North Vietnam targets.

29 Jul—132 are dead, two missing and 60 injured in fire which also destroyed 21 aircraft and damaged 41 others on board USS *Forrestal* (CVA 59).

3 Aug—Navy announces establishment of the Maury Center for Ocean Science at the Naval Research Laboratory, Washington, D.C.

4 Sep—Chaplain LT Vincent R. Capodanno is killed in Vietnam, the first Navy chaplain to die in the Vietnam conflict. He is posthumously awarded the Medal of Honor.

14 Dec—ROTC at predominantly black Prairie View A. & M. College in Texas is announced by DOD.

1968

16 Jan—Defense Department announces that Australian, Canadian and English naval aquanauts will participate in Sealab III.

23 Jan—USS *Pueblo* (AGER 2) is captured by North Korean patrol boats. Four of the 83-man crew are injured and one dies later of those injuries.

25 Jan—Six Naval Air Reserve squadrons report for active duty after mobilization as a result of the capture of *Pueblo*.

6 Feb—*Bache* (DD 470) is grounded and lost off Rhodes Harbor.

13 Feb—Navy's Fleet Ballistic Missile Submarine Force completes 500th successful patrol.

19 Feb—MM1 Fernando Lugo and MN2 Don C. Risk of the Navy aquanaut team set world record by "diving" to a simulated depth of 1025 feet, at the Navy Experimental Diving Unit in Washington, D.C.

15 Mar—Since April 1965, some 41,450 Navy enlisted men have volunteered for duty in Vietnam.

26 Mar—Battleship USS *New Jersey* (BB 62) sails from Philadelphia for sea trials after more than 10 years in mothballs.

31 Mar—In a nationwide address, the President asks for Vietnam peace talks to begin.

3 Apr—North Vietnam expresses willingness to discuss conditions for beginning peace talks.

14 Apr—U. S. Naval Oceanographic Office announces that Navy will join the U. S. Geological Survey in a study of the Gulf of Mexico.

3 May—North Vietnam agrees to meet in Paris for preliminary peace talks.

13 May—In the first callup of Reserve Seabee units, NMCBs are ordered to active duty.

14 May—Most decorated enlisted man in the Navy during Vietnam conflict, BM1 James E. Williams, USN, is awarded the Medal of Honor. Twice wounded in Vietnam, he has earned more than two dozen medals and awards, including Navy Cross, Silver Star Medal, Navy and Marine Corps Medal and two Bronze Stars.

5 Jun—Presumed loss of USS *Scorpion* (SSN 589) with her 99-man crew is declared by CNO.

8 Jun—USS *Dolphin* (AGSS 555) is launched. This submarine is designed to be the world's deepest-diving operational submarine.

25 Jun—Navy selects 54 aquanauts for Sealab III, nine civilians and five members of foreign navies.

1 Jul—Navy commissions its third training center, at Orlando, Fla.

12 Jul—Commander Paul S. Green MC, USNR, becomes first Black American to be selected as a captain in the U. S. Navy. Navy retires its last operational seaplane, a P-5 *Marlin*, and gives it to the Smithsonian Institution.

22 Jul—CDR S. R. Chessman flies record-breaking 306th combat mission in Vietnam conflict.

12 Aug—An attempt to find USS *Monitor*, lost on 30 Dec 1862 off Cape Hatteras, N. C., is announced.

16 Aug—America's newest missile, *Poseidon*, completes first flight, carrying dummy warhead.

7 Sep—USS *John F. Kennedy* (CVA 67) is commissioned at Newport News, Va.

11 Sep—Navy's North Pacific Project (NORPAC) commences, a system of unmanned, deep-moored buoys to gather meteorological and oceanographic data. Negotiations with North Korea for release of *Pueblo* and crew remain unsettled.

16 Sep—Six Naval Air Reserve squadrons recalled on 25 Jan are scheduled for release.

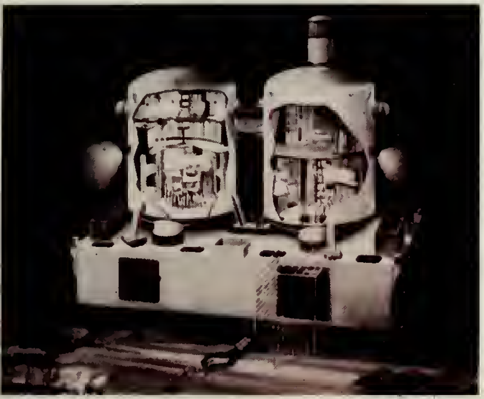
18 Sep—Navy announces new kind of gunpowder, NACO, that doubles life of rapid-fire shipboard guns.

30 Sep—USS *New Jersey* (BB 62), the first American battleship in action since the Korean conflict, joins the combat in the Republic of Vietnam.

16 Oct—Deep-diving, experimental miniature submersible *Alvin*, with nobody aboard, sinks in 4500 feet of water 120 miles south of Cape Cod, Mass.

24 Oct—The Chief of Naval Operations states that in 10 years the Soviets have become the second largest seapower in the world.

31 Oct—Objects identified as wreckage of USS *Scorpion* (SSN 589) have been located 400 miles southwest of the Azores in more than 10,000 feet of water, according to an announcement made by the Chief of Naval Operations. The President announces a complete halt to air, naval and artillery bombardment of North Vietnam.



Facing page: USS Dolphin (AGSS 55) after launching. Above: Drawing of habitat occupied by aquanaut-scientists for 60 days. Below left: Apollo 12 astronauts (left to right) CDR Charles Conrad, Jr., CDR Richard Gordon, Jr., and LCDR Alan Bean. Below right: Launch of Poseidon missile.

25 Nov—U. S. promises to support United Nations' efforts in sharing ocean discoveries with newly developing nations.

27 Nov—*Dolphin*, (AGSS 555), an experimental submarine, returns to Portsmouth Naval Shipyard. Reportedly, she had reached depths never previously reached by any other craft.

2 Dec—A Navy and civilian team begins simulated dive to 1000 feet in connection with Navy's Man-in-the-Sea Program.

15 Dec—TEKTITE, a plan to place four aquanauts in a seafloor habitat for 60 days, is announced.

23 Dec—North Korea releases 81 surviving crewmen of USS *Pueblo* (AGER 2), held for 11 months.

27 Dec—*Apollo 8*, first to orbit moon, splashes down in Pacific where *Yorktown* (CVS 10) is primary recovery ship.

1969

25 Jan—World's first nuclear-powered deep submergence research and ocean engineering vehicle, NR 1, is launched at Groton, Conn.

31 Jan—A Navy Court of Inquiry concludes that sinking of *Scorpion* (SS 589) was not caused by sabotage or foul play, although exact cause cannot be determined.

18 Feb—Navy christens the new Mark 1 underwater salvage system.

27 Feb—Restoration work on Bikini begins to enable those who wish to do so to return there to live.

28 Feb—U. S. Naval Oceanographic Office announces recent discovery of six new seamounts and several undersea channels in Sea of Japan.

18 Mar—DOD announces a shift to an all-distillate marine diesel type of fuel for Navy ship propulsion. New underwater record, 31 consecutive days, is set by TEKTITE I aquanauts.

20 Mar—Bathyscaph *Trieste II* commences being outfitted for further investigation of wreckage of *Scorpion* (SS 589).

10 Apr—NASA names three Navymen for second lunar landing mission, *Apollo 12*: CDRs Charles Conrad and Richard Gordon, and LCDR Alan Bean. Court of Inquiry into capture of *Pueblo* ends.

14 Apr—North Koreans shoot down Navy EC-121 during reconnaissance mission in the Sea of Japan, killing 31 men aboard.

14 Apr—TEKTITE I aquanauts complete 60 days submerged and begin decompression.

6 May—Navy announces that no disciplinary action will be taken against any of the crew of *Pueblo* (AGER 2), captured by North Korea in January 1968, following court of inquiry and interrogation of crew which began 26 Dec 1968.

7 May—The Secretary of Defense calls for leadership by installation and unit commanders in implementing equal opportunity and treatment policy.

22 May—A contract is awarded for design and construction of a prototype Deep Submergence Search Vehicle (DSSR).

3 Jun—USS *Frank E. Evans* (DD 754) and Australian carrier HMAS *Melbourne* (R 21) collide approximately 650 miles southwest of Manila, cutting the destroyer in two and killing 74 crewmen.

7 Jun—A new class of LST, USS *Newport*, is commissioned at Philadelphia.

9 Jun—Navy discloses that USNS *Mizar* (T-AGOR 11), an oceanographic research ship, located and photographed the sunken submersible *Alvin*.

11 Jun—USS *Hornet* (CVS 12) is named prime recovery ship for *Apollo 11* moon landing mission.

20 Jul—Former Navy pilot Neil Armstrong becomes the first man to set foot on the moon and places an American flag on the Sea of Tranquility.

5 Aug—Three American POWs, including two Navymen, are released by the North Vietnamese.

6 Aug—Crewmen for *Apollo 13* and *14* moon landing missions are announced; of the six men named, four are active duty Navymen assigned to NASA.

20 Aug—Navy Seabees and helicopters evacuate more than 820 persons from Pass Christian, Miss., three days after their town was devastated by hurricane Camille.

28 Aug—*Alvin* is recovered from ocean floor by USNS *Mizar* (T-AGOR 11) and the privately operated deep submersible *Aluminaut*.

9 Sep—USS *New Jersey* (BB 62), Navy's last active battleship, arrives in Bremerton, Wash., to begin inactivation.

16 Sep—President orders the authorized troop ceiling in Vietnam to be reduced to 484,000 by 15 Dec.

10 Oct—Eighty Navy river patrol boats are transferred to the Vietnamese Navy in the largest single turnover of its kind since the war began.

14 Nov—*Apollo 12* spacecraft, carrying an all-Navy crew, lifts off from Cape Canaveral on second lunar expedition. Those participating are CDR Charles Conrad, CDR Richard Gordon and LCDR Alan Bean.

24 Nov—*Apollo 12* astronauts complete man's second landing on the moon and are recovered by *Hornet* (CVS 12) after Pacific splashdown.

15 Dec—The President announces a 50,000-man reduction in Vietnam, bringing the total ordered home for the year to 110,000.

31 Dec—Navy reports 779 ships assigned to its active Fleet, consisting of 420 warships, 106 amphibious warfare, 74 mine warfare and 179 auxiliary ships. In addition, 44 ships were assigned to miscellaneous service plus 76 Naval Reserve ships, with 12 ships under conversion and 120 under construction.

1970

24 Jan—World's first deep submergence rescue vehicle, DSRV-1, is launched at San Diego, Calif.

4 Feb—USS *Finback* (SSN 670) is commissioned, designed as a mother ship to carry the DSRV to its operational site.

28 Feb—The first nuclear attack submarine tender, USS *L. Y. Spear* (AS 36) is commissioned in Portsmouth, Va. With turnover of 11 U. S. Navy *Swift* boats to South Vietnam, its Navy becomes responsible for coastal patrols in the five northernmost provinces of the Republic of Vietnam.

31 Mar—Navy's *Vanguard I*, with an anticipated life of 288 more years, becomes the oldest manmade satellite in orbit after *Explorer I* reenters earth's atmosphere and self-destructs.

1 Apr—First powered launch of *Condor* air-to-surface guided missile is declared a success.

3 Apr— The first crew of Underwater Research Project TEKTITE II takes up residence in the habitat.

17 Apr—*Apollo 13* spacecraft, forced to abandon lunar space mission, splashes down in Pacific where it is recovered by USS *Iwo Jima* (LPH 2).

10 May—The nation's oldest admiral, ADM Richard H. Jackson, USN (Ret), celebrates his 104th birthday. He retired in 1930 as Commander in Chief of the Battle Fleet, Pacific. (He died at the Naval Hospital, San Diego, on 4 Oct 1971, at age 105.)

17 May—Prairie View A&M in Texas graduates its first NROTC seniors; 13 Black Americans receive commissions during commencement ceremony.

17 Jun—ADM Thomas H. Moorer, moving from the post of Chief of Naval Operations, is confirmed by Senate as Chairman of the Joint Chiefs of Staff.

18 Jun—U. S. Naval Oceanographic Office reports discovery of four volcanoes and a volcanic ridge on the ocean's floor in the Pacific.

23 Jun—Navy turns over 273 combatant river craft to South Vietnamese Navy.

30 Jun—Active duty Navy personnel total 690,668. Total number in armed forces is 3,064,280.

1 Jul—The youngest (49) four-star admiral and the youngest man to serve as CNO, Admiral Elmo R. Zumwalt, Jr., takes command.

1 Aug—The Military Sea Transportation Service is redesignated as the Military Sealift Command.

3 Aug—First underwater firing of a *Poseidon* missile is successful. The missile was fired from USS *James Madison* (SSBN 627).

11 Aug—Navy announces it is studying possibility of a computer with ability to sense surroundings and respond intelligently to spoken commands.

15 Aug—Keel for nuclear-powered attack carrier *Dwight D. Eisenhower* (CVAN 69) is laid in Newport News, Va.

12 Sep—A U. S. naval force is reported steaming off coast of Israel, presumably to aid in possible evacuation of airline hostages being held in Jordan by Palestinian guerrillas.

18 Sep—Announcement is made that additional U. S. ships and aircraft have been sent to the Mediterranean out of concern for approximately 450 Americans in Jordan threatened by the fighting there.

22 Sep—Joint session of Congress is held to focus public attention on the more than 1500 American POWs/MIAs in Southeast Asia—some of them for as long as six years.

24 Oct—A new concept in minesweeping is announced; it will be used by the Navy when the minesweeping version of the H-53 *Sea Stallion* helicopter becomes operational in 1972.

2 Nov—The U. S. proposes an international agreement to stop flushing tankers at sea during NATO conference at Brussels.

12 Nov—AFCM John D. Whittet is selected as the second Master Chief Petty Officer of the Navy (MCPON).

17 Nov—State Department confirms U. S.-Soviet understanding, barring use of Cuba as a USSR nuclear submarine base.

3 Dec—Secretary of the Navy prohibits dumping of oil and sludge wastes into oceans and rivers.

30 Dec—U. S. Navy closes out its last coastal and inland waterway operations in the Republic of Vietnam and turns over 125 boats to Vietnam Navy.

1971

22 Jan—Navy P-3 patrol plane sets new world's distance record by landing at Patuxent River, Md., after a 7010-mile flight from Atsugi, Japan, which took 15 hours, 21 minutes. The previous record was 4761 miles.

11 Feb—Navy announces a policy of accepting Filipinos as seaman recruits and assigning ratings on a wide basis rather than as stewards.

2 Mar—ROTC program in Florida will commence at Jacksonville State University in the fall as part of Navy policy to increase the number of black officers.

5 Mar—A service-wide program is announced providing for each member entering the armed services to attend race relations classes.

22 Mar—Navy says that ROTC units will be established at Savannah State College, Ga., and Southern University in Baton Rouge, La., both predominantly black colleges.

1 Apr—The Chief of Naval Operations announces a program to improve education, job training, promotion and recruitment of blacks in the Navy.

20 Apr—USS *Tucumcari* (PGH 2), a hydrofoil gunboat, begins demonstrations to NATO.

21 Apr—Establishment of the Navy Recruiting Command as a field activity of the Bureau of Naval Personnel is announced.

28 Apr—Navy announces selection of 49 rear admirals, including the first black American to be named, CAPT Samuel L. Gravely, and America's first man in space, CAPT Alan B. Shepard.

24 May—Pentagon announces plans to "beef up" the Sixth Fleet in response to growing Soviet naval power in the Mediterranean.

4 Jun—A newspaper report states that aerial intelligence has spotted what appears to be communist China's first nuclear submarine under construction.

14 Jun—CNO announces that the enlisted men's uniform will be replaced by an officer-style uniform during the next five years.

16 Jun—Hon. James E. Johnson is first black to be Assistant Secretary of the Navy (Manpower and Reserve Affairs).

16 Jul—Defense Department establishes an Office of Ocean Affairs, with Under Secretary of the Navy John Warner as its director, who will represent the Department in all international negotiations dealing with ocean affairs.

17 Jul—The last of 149 Atlantic Fleet ships complete operations in Southeast Asia which began 10 May 1965.

21 Jul—Navy announcement states that a single Navy training command will be established in Pensacola, Fla., with all training activities coming under that command.

31 Jul—Total Navy strength to this date is 618,976 active duty personnel.

31 Aug—The U. S. Naval Station at Sangley Point in the Republic of the Philippines is turned over to the Filipino government.

1 Sep—Concern is voiced by State Department over Soviet arms delivery to Egypt and the increased number of Russian pilots flying jets in the area.

8 Oct—The largest U. S. base on the five-and-one-half-million-mile Antarctic continent opens at McMurdo Station for the 18th straight year of operations.

3 Nov—A plan to test the feasibility of commercial tankers refueling U. S. Navy ships is announced by the Navy and the Maritime Administration.

1 Dec—The Secretary of the Navy announces recruit training for women will be transferred from Bainbridge, Md., to Orlando, Fla.

3 Dec—India and Pakistan state they are at war.

14 Dec—USS *Enterprise* (CVAN 65) and a task force of several American ships enter the Indian Ocean for possible rescue of American citizens during the fighting in the India-Pakistan war.

21 Dec—The U. S. Coast Guard ends six and one-half years of participation in Southeast Asia.

31 Dec—The Navy's last ropemaking facility, the 147-year-old ropewalk at the Boston Naval Shipyard, is closed. Navy active duty personnel strength is 600,885, representing a 50,000 decrease from the same date a year earlier.

1972

8 Jan—USS *Stein* (DE 1065) is commissioned at Puget Sound, Wash.

22 Jan—USS *Beaufort* (ATS 2), the second of three U. S. Navy salvage and rescue ships, is commissioned at Norfolk, Va. This ship combines functions of the salvage rescue ship and the standard fleet ocean tug.

25 Jan—President Nixon discloses a previous Vietnam peace proposal providing for pullout of U. S. forces in six months in exchange for a cease-fire and release of all American POWs.

8 Feb—SECNAV announces opening of NROTC to women for the first time in Navy history.

18 Mar—*Jesse L. Brown* (DE 1089) is launched at Westwego, La., the first ship of the U. S. Navy to be named in honor of a black naval officer.

1 Apr—The Navy withdraws its last combat force from Vietnam. The unit involved is Light Attack Squadron Four which flies the *Bronco*, a propeller-driven counterinsurgency aircraft.

6 Apr—For the first time since 1968, hundreds of Navy and Air Force planes strike military targets in North Vietnam.

8 Apr—President Nixon names Undersecretary of Navy John W. Warner to succeed John H. Chafee.

27 Apr—Captain Arlene Duerk, Navy Nurse Corps, becomes the first woman to achieve the rank of rear admiral in the U. S. Navy.

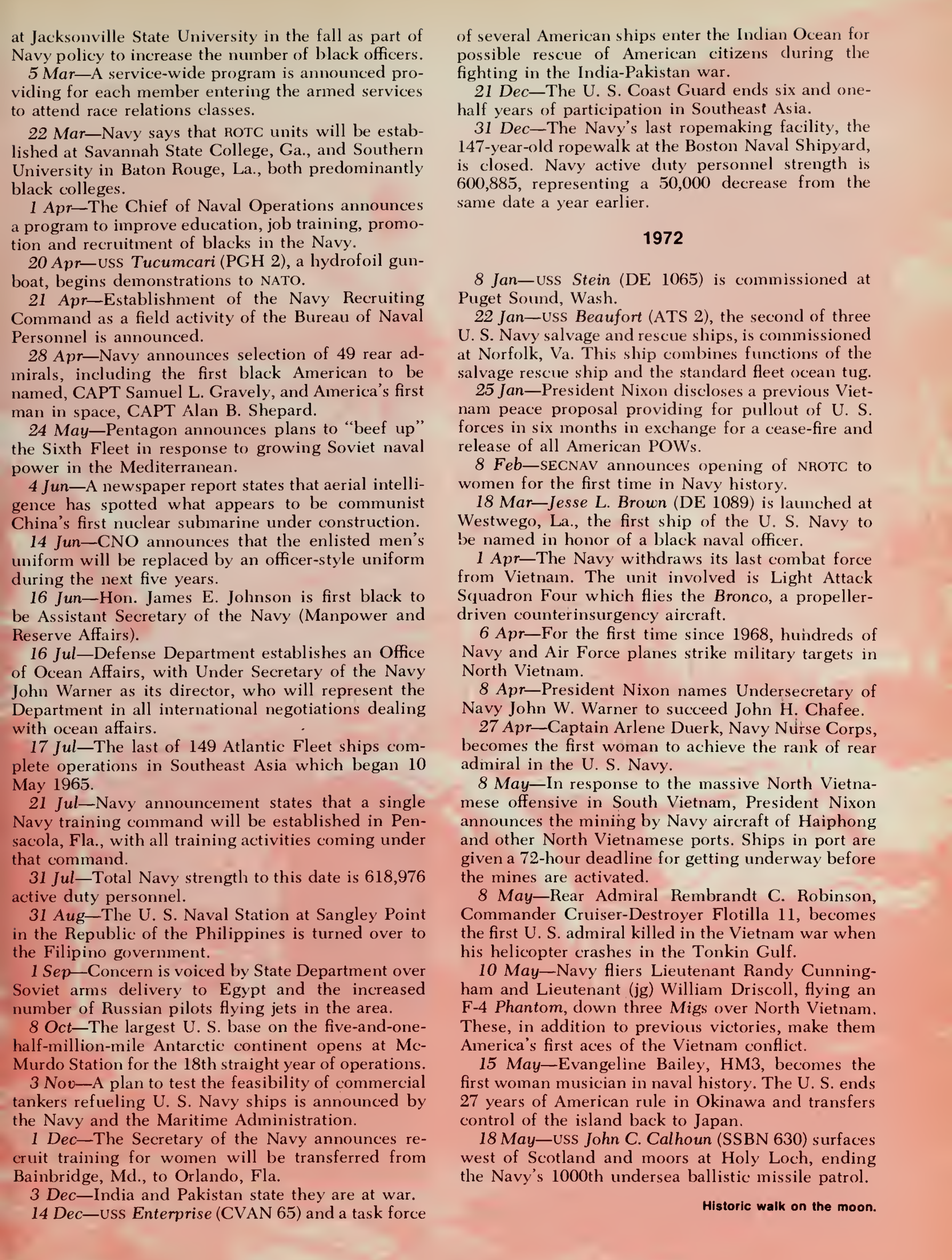
8 May—In response to the massive North Vietnamese offensive in South Vietnam, President Nixon announces the mining by Navy aircraft of Haiphong and other North Vietnamese ports. Ships in port are given a 72-hour deadline for getting underway before the mines are activated.

8 May—Rear Admiral Rembrandt C. Robinson, Commander Cruiser-Destroyer Flotilla 11, becomes the first U. S. admiral killed in the Vietnam war when his helicopter crashes in the Tonkin Gulf.

10 May—Navy fliers Lieutenant Randy Cunningham and Lieutenant (jg) William Driscoll, flying an F-4 *Phantom*, down three *Migs* over North Vietnam. These, in addition to previous victories, make them America's first aces of the Vietnam conflict.

15 May—Evangeline Bailey, HM3, becomes the first woman musician in naval history. The U. S. ends 27 years of American rule in Okinawa and transfers control of the island back to Japan.

18 May—USS *John C. Calhoun* (SSBN 630) surfaces west of Scotland and moors at Holy Loch, ending the Navy's 1000th undersea ballistic missile patrol.



Historic walk on the moon.

26 May—Navy announces the establishment of Human Resources Development Centers at four major naval bases to assist local commands in coping with personnel problems such as race relations, drug and alcohol abuse and the like.

27 May—USS *Barnstable* (LST 1197) is commissioned at Long Beach, Calif. This ship, one of the *Newport* class, is of a new design in LSTs. Her most conspicuous innovations are her clipper bow and her 112-foot over-the-bow-ramps.

1 Jun—Navy announces it has gained permission from Greece to begin homeporting in that country.

28 Jun—President Nixon orders that from this date forward, no draftees be sent to Vietnam unless they volunteer for duty there. SECNAV announces first of a new class of nuclear-powered guided missile frigates will be named *Virginia*. Navy's new F-14 *Tomcat* makes its first arrested landing on board USS *Forrestal* (CVA 59) off the Virginia coast.

29 Jun—Chairman of the Joint Chiefs of Staff, Admiral Thomas H. Moorer, receives the "Venerable Order of the Gray Eagle," signifying the "most ancient naval aviator on active duty." He succeeds retiring Rear Admiral Francis D. Foley.

22 Jul—One of a group of eight advanced-design ammunition ships, USS *Mount Baker* (AE 34) joins the fleet at Charleston, S. C. She is equipped for transfer of ammunition by standard tensioned replenishment alongside method and with helicopters for vertical replenishment operations.

27 Jul—Senate approves construction of a new fleet of *Trident* subs to succeed *Polaris/Poseidon* subs.

11 Aug—With the withdrawal of its last units in Vietnam, the U. S. ends its ground combat role in that country. Ensign Rosemary E. Nelson and Lieutenant (jg) Ann Kerr become the first women assigned to regular shipboard duty other than as nurses.

18 Nov—Hospital ship USS *Sanctuary* (AH 17) is recommissioned, the first U. S. Navy ship to have women included in her crew.

22 Nov—Ground is broken for the new structure of the Naval Aviation Museum at Pensacola, Fla.

12 Dec—USS *Sanctuary* (AH 17) steams out of San Francisco with a woman sailor in the bridge watch, ending a seagoing tradition dating back to the days of wooden ships.

30 Dec—President Nixon announces the halt of all U. S. bombing and naval bombardment of North Vietnam above the 20th parallel with the resumption of private peace negotiations in Paris.

1973

4 Jan—SECDEF orders an end to compulsory attendance at religious services in accordance with a recent Supreme Court ruling.

10 Jan—Secretary of the Navy John W. Warner announces the selection of the first eight women to participate in the Navy's flight training program.

27 Jan—The draft ends and the era of an all-volunteer force begins after a Vietnam cease-fire is signed in Paris. The end of the draft is six months earlier than had been expected, owing to the cease-fire and the fact that the Secretary of the Army sees no need for further induction.

1 Feb—U. S. Third Fleet is reactivated with the merger of the First Fleet and the Antisubmarine Warfare Force staffs.

12 Feb—The first American prisoners of war released by North Vietnam receive a hero's welcome at Clark Air Force Base in the Republic of the Philippines.

27 Feb—*End Sweep* airborne mine countermeasures operations begin off Haiphong in a first for mine warfare as airborne minesweeping had never been done with "live" mines.

1 Mar—The SES-100B surface effect test craft reaches a speed of more than 70 knots during tests, breaking the world speed record for this type of craft at New Orleans, La.

4 Mar—Second group of U. S. POWs leaves Hanoi under terms of Paris cease-fire accord.

29 Mar—Last American troops leave Vietnam.

16 Apr—Navy announces that *Trieste I* will become an exhibit at the Navy Memorial Museum at the Washington Navy Yard.

17 Apr—Secretary of Defense Elliot L. Richardson announces details of actions to consolidate, reduce, realign or close military installations in the U. S. and Puerto Rico. This is expected to save about $3.5 million over the next 10 years. The active fleet ship level will also be reduced.

14 May—The Supreme Court rules that women members of the armed forces are entitled to the same dependency benefits for their husbands as servicemen have always received for their wives.

14 May—Skylab I is launched unmanned. It is the first orbiting space station.

25 May—An all-Navy *Skylab* crew is launched into space for a 28-day mission aboard America's first space laboratory.

31 May—Flight pay ends for colonels and generals and captains and admirals who are not assigned to designated flying billets. An estimated 5000 officers are affected.

Above: USS Spruance (DD 963). Left: Surface effect ship (SES 100B).

18 Jun—The first group of American specialists arrives in Haiphong to resume minesweeping operations halted earlier because of a cease-fire violation.

22 Jun—Navy declares Haiphong Channel to be safe for shipping, although helicopters continue to sweep the edges of the channel. The all-Navy crew of *Skylab I* splashes down in the Pacific. USS *Ticonderoga* (CVS 14) recovers Captain Charles Conrad, Jr., and Commanders Joseph P. Kerwin and Paul J. Weitz who had set numerous records and accomplished virtually all their objectives.

1 Jul—Transition to the officer-type uniform for all Navy enlisted men commences, with the new uniform becoming mandatory 1 July 1975.

2 Jul—The first woman chaplain in the Armed Services, Florence D. Pohlman, is sworn into the Navy in Washington, D. C.

2 Jul—Navy's water jet-propelled SES-100A establishes a new speed record for surface effect ships of 88 mph (76 knots).

18 Jul—Navy announces reestablishment of the Naval Reserve merchant marine program. Defense Department announces the end of "Operation End Sweep," the Navy minesweeping effort in North Vietnamese waters.

24 Jul—Recruit Training Command in San Diego announces that boot camp will be increased from seven and a half to nine weeks effective 3 Sep.

15 Aug—All American offensive operations in Southeast Asia end.

1 Sep—The last squadron of Marine F-4 *Phantoms* on the Asian mainland flies out of Thailand. The unit is also the last U. S. Marine combat force to leave after an 11-year commitment in Indochina.

5 Sep—Captain Alan L. Bean, U. S. Navy, in orbit in Skylab II, sets a new record for the most time in space, breaking Navy Captain Charles Conrad's record of 49 days, three hours and 37 minutes.

25 Sep—Second Skylab crew, Captain Alan Bean commanding, splashes down safely and is recovered by USS *New Orleans* (LPH 11).

6 Oct—Arab-Israeli war erupts at Suez Canal and Golan Heights, the most extensive fighting in 25 years.

17 Oct—The Key West Naval Base is left without a ship with the decommissioning of USS *Amberjack* (SS 520). The base is scheduled to be closed in the spring of 1974.

10 Nov—The Navy's first gas turbine-powered destroyer, *Spruance* (DD 963), is launched at Pascagoula, Miss., the first of 30 large ships in her class.

12 Nov—The Navy Race Relations School opens in Memphis, Tenn.

14 Nov—Navy begins operating a television station in the Antarctic.

19 Nov—The U. S. Sixth Fleet, on alert because of the Middle East War, is returned to "normal training condition" status.

28 Nov—President Nixon signs into law the emergency petroleum allocation act, necessitated by the Arab boycott of oil exports to the United States.

29 Nov—Navy announces that a triservice medical university will be built in Bethesda, Md. The university is scheduled to be operational by 1978.

1 Dec—The first of five of an entirely new class of amphibious assault ships is launched at Pascagoula, Miss. *Tarawa* (LHA 1) is expected to offer the Navy the greatest operational versatility in the history of amphibious warfare.

20 Dec—Two women physicians, Lieutenants Jane O. McWilliams and Victoria M. Voge, graduate from the naval flight surgeon training program to become the Navy's first women flight surgeons.

1974

10 Jan—SECNAV directs establishment of the Navy Metrication Group which is assigned responsibility for gradual conversion to the metric system.

14 Jan—The Defense Department announces plans to cut its manpower, reducing the Navy by 15,000.

8 Feb—USS *New Orleans* (LPH 11) recovers the three astronauts of Skylab III in the Pacific.

5 Mar—The X-24B aircraft, designed to test approach and landing techniques for the U. S. space-shuttle program, makes its first supersonic flight.

24 Apr—NIMBUS STAR, minesweeping of the Suez Canal, is begun by U. S. naval forces. It is completed 3 Jun.

22 May—Ground is broken at Gulfport, Miss., for a new facility to house residents of the U. S. Naval Home, presently located in Philadelphia.

27 May—Memorial dedication is held for the Seabees near the entrance to Arlington National Cemetery, Arlington, Va.

30 May—As a result of the energy crisis, Naval Facilities Engineering Command is designated to lead the Naval Material Command's Energy Program.

18 Jun—Navy announces the relocation of the Naval Academy Preparatory School from Bainbridge, Md., to Newport, R. I., to commence 1 July 1974.

1 Jul—Boston Naval Shipyard, the oldest in the nation, closes after 174 years of service. A new command, entitled the Naval Sea Systems Command, is established. It combines all the functions of the Naval Ship Systems Command and the Naval Ordnance Systems Command which are simultaneously disestablished.

16 Jul—For the first time, 15 women report to the Merchant Marine Academy as plebes in the 348-person class of 1978.

22 Jul—U. S. and British helicopters evacuate more than 400 citizens of the U. S. and other countries from Cyprus to USS *Coronado* (LPD 11) which transports the evacuees to Beirut.

1 Sep—U. S. Air Force SR-71 reconnaissance plane sets a new record with a flight from New York to London, lasting only one hour, 56 minutes.

9 Sep—Defense Department announces the President approved a directive for variable incentive pay for medical officers, allowing them a bonus of up to $13,500 a year for each year they agree to serve after their initial active duty obligation is complete.

16 Sep—President Ford announces establishment of a clemency program for draft evaders and deserters of the Vietnam War.

30 Sep—Twentieth reunion of those associated with the design, development, construction or operation of USS *Nautilus* (SSN 571), the Navy's first nuclear-powered ship, is held in Groton, Conn.

30 Oct—Admiral James L. Holloway III, Chief of Naval Operations, indicates the Navy will drop below 500 ships for the first time since 1939 before there is an increase.

9 Nov—The first of a new class of patrol hydrofoil missile ships, *Pegasus* (PHM 1), is launched in Seattle.

24 Nov—Group built around USS *Constellation* (CVA 64) sails into the Persian Gulf, the first carrier to enter the Gulf since 1948.

2 Dec—Navy confirms that USS *Sanctuary* (AH 17) will be decommissioned and with it the women-at-sea program would be discontinued in the spring of 1975.

9 Dec—The U. S. opens its first embassy in East Berlin.

10 Dec—Navy announces changes, effective 30 Jun 1975, in a number of ship classifications and designations to improve the accuracy of the names.

23 Dec—The B-1 supersonic bomber makes its first flight, lasting 77 minutes.

25 Dec—Soviets announce they have the first atomic lighthouse in service on the Baltic.

Top: USS Nimitz (CVAN 68). Above: Patrol hydrofoil Pegasus (PHM 1). Right: Navy Birthday insignia created by DM2 Lloyd Marshall.

1975

11 Jan—A force built around USS *Enterprise* (CVAN 65) begins a one-month "naval ops" in the Indian Ocean.

1 Feb—USS *L. Mendel Rivers* (SSN 686), a *Sturgeon*-class nuclear-powered submarine, joins the fleet at Newport News, Va.

16 Feb—Guided missile cruiser USS *California* (CGN 36) becomes the sixth nuclear-powered surface ship to join the Navy as she is commissioned at Newport News, Va.

28 Feb—The U. S. Navy discloses the possible existence of an offshore oil field in the continental shelf off Marie Byrd Land, Antarctica.

29 Mar—American naval transports and vessels under MSC contract begin evacuation of South Vietnam from path of advancing communist forces.

11 Apr—*Eagle Pull* Operation is conducted as helicopters from USS *Okinawa* (LPH 3) and USS *Hancock* (CVA 19) lift 82 Americans and 194 nationals of other countries from Phnom Penh, Cambodia.

U.S. Navy 200th Birthday

75

Building on a Proud Tradition

27 Apr—The Russian Tass announces successful completion of a worldwide naval exercise involving 200 USSR ships.

29 Apr—U. S. helicopters, operating principally from Amphibious Group 1 ships, land on Saigon rooftops and at Tan Son Nhut air base to evacuate all but a handful of the 900 Americans still in Saigon. Agreement between U. S. and Greece to end homeporting of U. S. ships in Greek ports is announced.

30 Apr—Pentagon announces that the U. S. Navy rescued approximately 18,000 South Vietnamese who had fled that country in sampans, rafts and other small craft. Thousands of others are rescued by ships under contract to Military Sealift Command. South Vietnam surrenders unconditionally to the Viet Cong.

3 May—The largest warship in the world, USS *Nimitz* (CVAN 68), is commissioned at Norfolk, Va.

4 May—USS *Bluefish* (SSN 675) surfaces at the North Pole during annual exercise to maintain the U. S. Navy's arctic submarine capability.

5 May—United States and Thailand jointly announce that American troop strength in Thailand would be reduced by 28 per cent, to 19,500.

7 May—Two Federal Republic of Germany freighters complete their transit of the Suez Canal, steaming from an eight-year prison in Great Bitter Lake to Port Said.

12 May—The American merchantman SS *Mayaguez* is fired on and boarded by Cambodian naval forces in the Gulf of Thailand and moved toward the Cambodian coast. Two Russian destroyers begin a visit to Boston, while USS *Leahy* (CG 16) and *Tattnall* (DDG 19) begin a visit to Leningrad. These reciprocal visits are in honor of the 30th anniversary of the Allied victory over Germany.

14 May—After air strikes by USS *Coral Sea* (CVA 43) planes, a U. S. Marine landing on Kaoh Tang Island, and the landing of a boarding party from USS *Harold E. Holt* (FF 1074) of U. S. Marines to re-seize SS *Mayaguez*, the crew of that ship are released by their captors and the freed *Mayaguez* gets underway to clear the Cambodian coast.

5 Jun—USS *Little Rock* (CG 4), with Commander Sixth Fleet embarked, participates in the Suez Canal opening ceremonies.

6 Jun—Chief Petty Officer W. R. Rhodes sets a world's open-sea diving record of 1148 feet during tests of the Mark I Deep Diving system in the Gulf of Mexico.

12 Jun—USS *Trippe* (FF 1075) and *Joseph Hewes* (FF 1078) transit north through the Suez Canal from the Red Sea to the Mediterranean en route Charleston from Middle East deployment. They were the first commissioned U. S. Navy ships to transit the entire canal since *Intrepid* (CV 11) in 1967.

20 Jun—USS *Wainwright* (CG 28) begins the first official visit by a U. S. Navy ship to Romania since World War II when she arrives in the Black Sea port of Constanta.

30 Jun—The Alaskan Command (ALCOM) and the Continental Air Defense Command (CONAD) are disestablished.

1 Jul—Commander Naval Surface Force, Atlantic Fleet (COMNAVSURFLANT) and Commander Naval Surface Force, Pacific Fleet (COMNAVSURFPAC), established 1 January, become fully operational. Naval Ordnance Laboratory, White Oak, Md., and Naval Weapons Laboratory, Dahlgren, Va., complete a reorganization which combines them into a single command, the Naval Surface Weapons Center, with headquarters at White Oak, Md.

13 Oct—Navy celebrates 200th birthday and enters into its third century of service to the nation.

letters to the editor

VIP Passenger

Sir: Chronology V in March All Hands included a picture of President Truman aboard USS *Tusk* and a cutline stating that he was the first President to travel underwater in a submarine. This is not so.

On 25 Mar 1905, USS *Plunger*, first submarine to be accepted by the Navy, made a test dive with President Theodore Roosevelt aboard.

The incident, which took place off Sagamore Hill, President Roosevelt's summer home located on Oyster Bay, Long Island Sound, was first brought to my attention in October 1964 by an old friend and shipmate of mine, Patrick E. Ryan, ENS, USN(Ret).

Pat Ryan was a gunner's mate first and serving in *Plunger* at the time the incident occurred. He told me that when President Roosevelt came aboard, he asked the captain, Lieutenant Charles P. Nelson, how deep the boat could go? When told 125 feet, he said, "Take her to the bottom," which was about 75 feet. While resting on the bottom, the President asked the captain, "What would be done in a similar situation if the boat lost all power?" The captain responded by pulling the main power switch and the crew started manning the hand pumps, pumping water out of the ballast tanks. When *Plunger* surfaced, the President was elated, and of course he had to be taken out for a ride. A practice torpedo run was made with the President conning the boat. This was accomplished by peering through a glass port in the conning tower while *Plunger* porpoised on her run. The President showed his enthusiasm for the job with occasional shouts of "Bully!"

Upon returning to Sagamore Hill, President Roosevelt stated he was convinced that the submarine had tremendous potential as a man-of-war. He also was aware of the dangers to which submarine crews were subjected, and later authorized hazardous duty pay for submariners—a dollar a dive, not to exceed 15 dives per month.

Shipmate Ryan, a Navy Cross winner, passed away in November at the ripe old age of 96. At the time of his death, he was the oldest ensign on the Navy retired rolls.—CTC George C. Bernatz, USN(Ret).

- *Thanks for your very interesting account of Teddy Roosevelt's ride in a sub. Stories like this are a "bully" spin-off of the Chronology series printed in All Hands. We try to get all the facts in the first place, but when we don't, we rely on accounts like yours to provide a full account to the footnotes of history.*—Ed.

Perfect Exam Scores

Sir: While the accomplishments of the men of USS *Lapon* (SSN 661) are indeed noteworthy (Taffrail Talk, April 1975), I strongly disagree with your statement that a 100 per cent pass rate on an advancement exam is "almost unheard of." Thirty-two members of this command participated in, and *passed*, the August 1974 exam. Of the 32 tested, 26 have been advanced, five were PNA'd, and one selectee was caught in the promotion freeze. Additionally, three men have been advanced off the August exam after being transferred to this activity.—DT1 E. G. S.

- *While the BuPers Enlisted Advancement Section does not compile statistics on the success of individual units with regard to advancement examinations, it is believed that in future advancement cycles it will not be a remarkable achievement for a command to achieve a 100 per cent "pass" rate.*

Commencing with the February 1974 advancement cycle, a new concept in the enlisted advancement system reduces the relative importance of the written examination and places more emphasis on an individual's professional performance in the computation of final multiple scores. This change will give recognition to the consistently superior performer who is not a particularly good "test taker," by reducing the passing score to include a larger number of candidates in the "pass" category (estimated to be between 92 and 96 per cent of all test takers) and thus establish their eligibility for final multiple score computation. Passing the examination has always been a requirement in order to have a final multiple score computed. By lowering the pass score, more members will now be eligible to have their final multiple score computed.—Ed.

Alien Travel

Sir: In your informative article "Immigration & Naturalization," May 1975, p. 48, you failed to mention one important point.

In most cases, before any alien, including alien dependents of military personnel, may leave the U. S. to travel or accompany a sponsor overseas the alien must obtain a Certificate of Compliance, or "sailing permit," from the Internal Revenue Service. The certificate is proof that any past federal income taxes and taxes owed to the date of departure are paid.

The certificate should be obtained from the District Director for the district in which the alien is located. The IRS suggests aliens get the certificate at least two weeks before departure, but applications may not be filed earlier than 30 days before departure.

To get the certificate, an alien must appear in person at a specified IRS office and bring: Passport and Alien Registration Card (INS Form I-151); copies of income tax returns filed for the past three years; receipts for income taxes paid for the above returns; records that substantiate deductions and dependents claimed on the above returns; a statement from each employer showing wages paid and tax withheld from 1 January of the current year to the date of departure; documents showing gain or loss from the casual sale of personal property, including capital assets and merchandise. If self-employed, the alien must bring a profit-and-loss statement prepared for the period from 1 January of the current year to the date of departure instead of an employer's wage/tax statement.

An alien who tries to leave the States without a certificate and who cannot show that he qualified for departure without one, will be subject to an income tax examination at the point of departure. He will then be required to make out the necessary income tax returns and statements and, ordinarily, pay any taxes that may be due.

Complete details about the Certificate of Compliance may be found in IRS Publication 519, or may be obtained at any IRS office. The IRS does not require any type of report to them upon reentry to the U. S.—SM1 R. V. D.

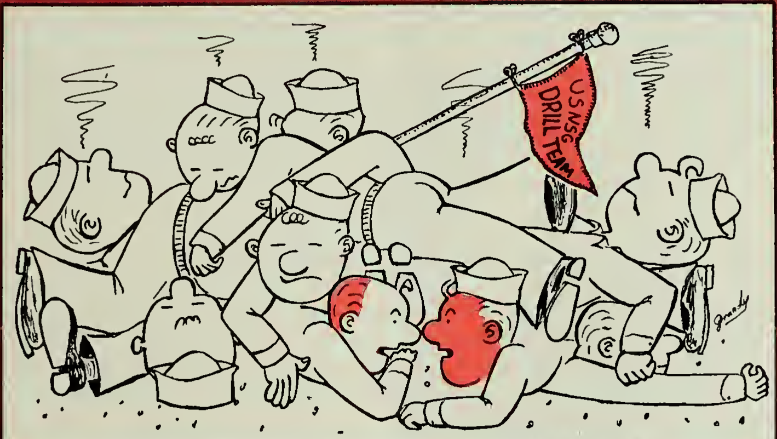
on the serious side

"Gosh! What a catch!"

SN John Benson

"He said scotch and SODA . . . water makes him seasick."

CTSN Michael Grandy



"What did he say?" "I don't know. It sounded like 'hahrur Harr'."

LTJG P. McVay, USNR

"I'll see your 25 thousand and raise you 30 thousand."

CTC Ernest Mawn, Jr.

THAT LAST CALL JUST REMINDED ME.....YOUR EYE APPOINTMENT HAS BEEN CHANGED TO 1500
USNH EENT

TAFFRAIL TALK

It's nice to hear people talk about things they love. It fills you with warm fuzzies to see the twinkle in their eyes and listen to the bubble in their voices. We recently received two letters from people talking about the Navy they love. We'd like to share them.

From a Navy mother to a recruiter: "I think I should let you know one of your seaman recruits has a hereditary disease. His father had it 29 years, 10 months and four days ago, and recently his brother had exactly the same thing. Today I saw the symptoms in the youngest member of the family.

"As soon as a male member of the family turns 17, his blood turns to salt water. His heart beats to the tune of 'Anchors Aweigh' and he has to have a cure at Great Lakes called 'boot camp.' Upon release he is filled with a lifetime supply of sea stories.

"That forbidding, windowless recruiting building again opened its mouth for breakfast and swallowed up my boy! I'll never see him again!

"Oh, yes, in seven weeks you'll invite me to come to Great Lakes. There, with bands playing and flags waving, you'll march him out tall and proud in that blue uniform and give him back—a man!

(signed) Proud mother of a Navy man."

(Editor's Note: The proud mother is Mrs. Joseph Drahos of Midlothian, Ill., whose husband served as an electrician's mate in the Navy during World War II.)

* * *

From a retired chief: "I thought your readers would like to know what the Navy used to be like. I enlisted on 16 Aug 1915 and was sent to Newport, R. I., for my training, which in those days was six months long. From there I went to the Fleet and was quartered aboard USS *Constellation*, also at Newport. My first boss was Rear Admiral Austin M. Knight, who wrote *Knight's Modern Seamanship*. I served on his 50-foot coal-burning barge. My pay at that time was $17.60 per month, but those were real silver dollars and we all loved our Navy. Our ship was our home and shore duty never entered our minds.

"From Newport I went to the battleship USS *New York*. It took us 13 days to get to Scapa Flow, Scotland, where the German Fleet surrendered in WWI. I was there, and also had the pleasure of meeting the King and Queen of England (George V and Queen Mary). We had a crew of about 1400 officers and men, and the King and Queen furnished venison for all of us. It was just out of this world, and especially during wartime.

"Later, back in the States, I was transferred to destroyers. Over 50 years ago, on the night of 9 Sep 1923, I was in USS *Young* when seven destroyers went on the rocks at Honda Point in the Santa Barbara Channel. I spent six hours in that cold water and we lost 23 men. Fortunately, I am still around.

"In WWII, I went to the South Pacific in a sub chaser and had more close calls, but it was all for a good country and a good Navy.

"I also helped coal one of the ships that had made the cruise with the Great White Fleet. Did you know in those days, 1915 and before, sailors wore pajamas and chiefs long nightgowns? When an order came down to do away with the pajamas we put them on over our dungarees to keep the coal dust out and then threw them away.

"We still have the best Navy in the world and life for men and women in the service today is a wonderful career.

(signed) CPO Paul W. Schick, USN (Ret)"

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

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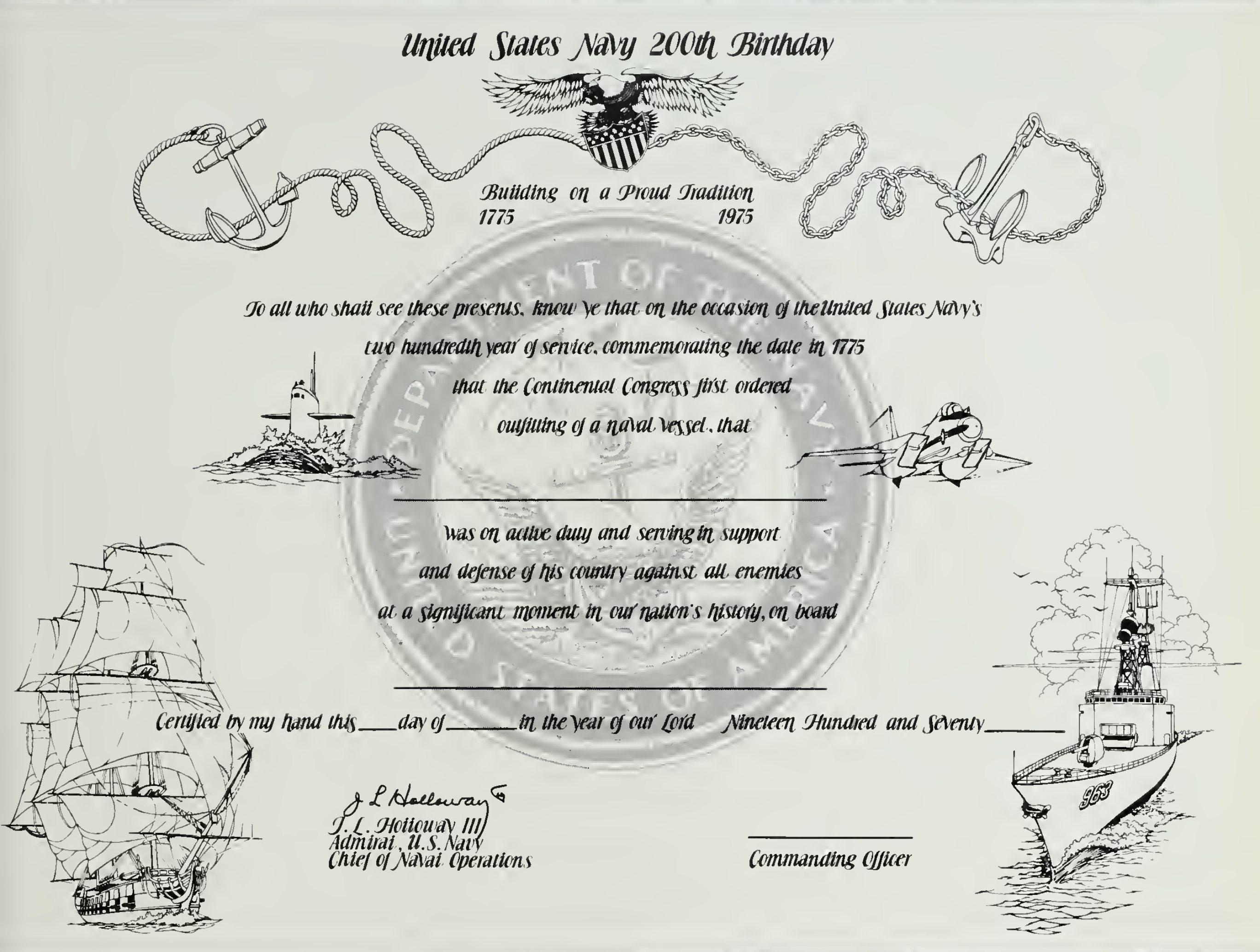

United States Navy 200th Birthday

Building on a Proud Tradition
1775 1975

To all who shall see these presents, know ye that on the occasion of the United States Navy's two hundredth year of service, commemorating the date in 1775 that the Continental Congress first ordered outfitting of a naval vessel, that

____

was on active duty and serving in support and defense of his country against all enemies at a significant moment in our nation's history, on board

____

Certified by my hand this ____ day of _______ in the year of our Lord Nineteen Hundred and Seventy______

J L Holloway
J. L. Holloway III
Admiral, U.S. Navy
Chief of Naval Operations

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Commanding Officer

This United States Navy 200th birthday certificate was recently distributed to all commands by the Navy Internal Relations Activity. It is designed for local reproduction to be given to all Navy personnel on active duty as a memento of their service during the Navy's 200th birthday year. It may be presented, at the discretion of commanding officers, at any time from 13 Oct 1975 to 13 Oct 1976 as an appropriate part of the nation's bicentennial observance.

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ALL HANDS

MAGAZINE OF THE U. S. NAVY—53RD YEAR OF PUBLICATION

NOVEMBER 1975 NUMBER 706

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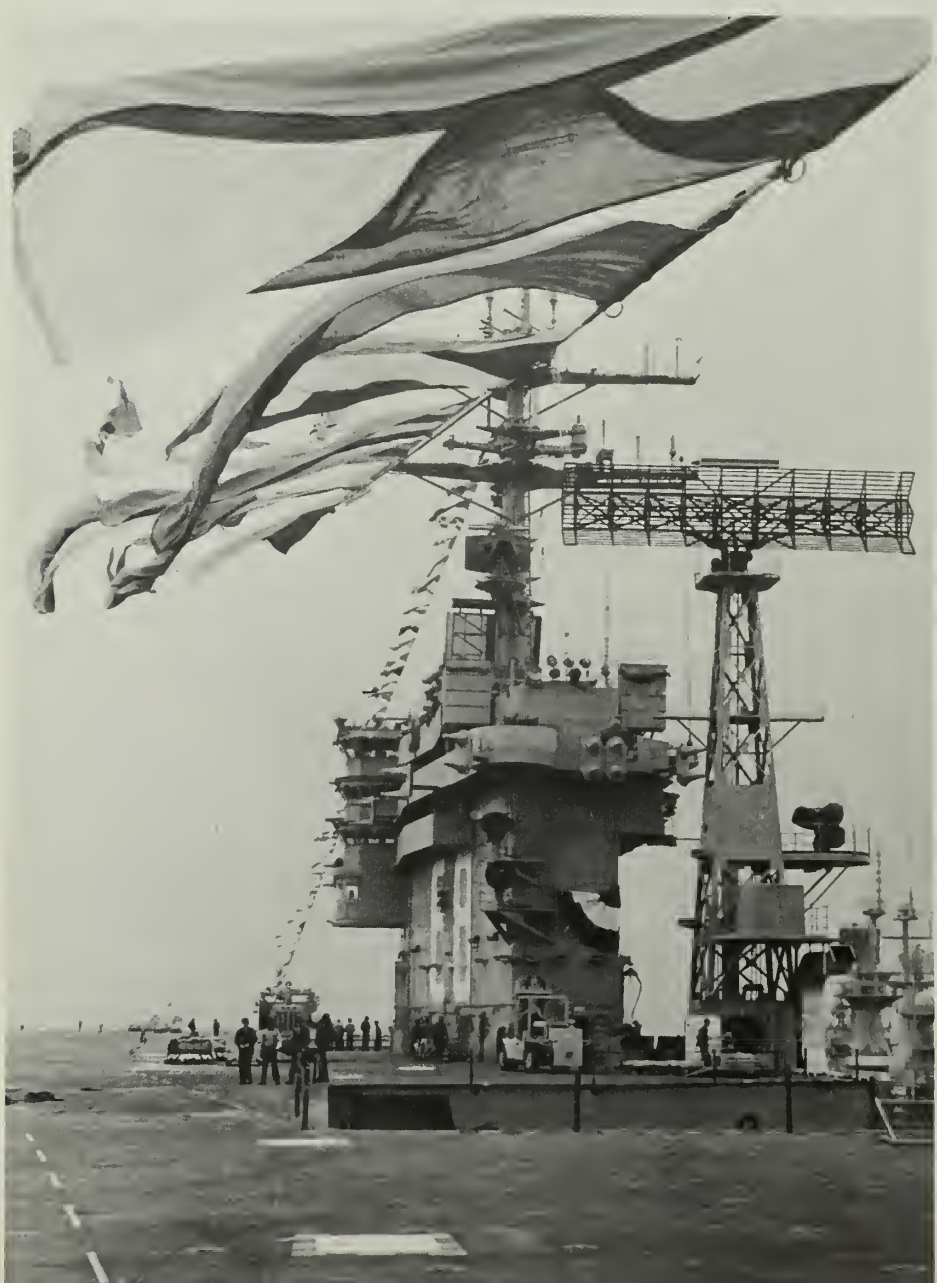
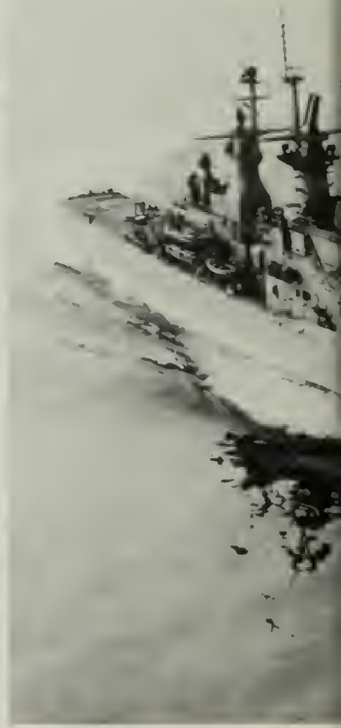
AT LEFT: READY AND WAITING: At Naval Air Station Pensacola, Fla., a Helicopter Training Squadron Eight TH-57A Sea Ranger is parked, awaiting the next student pilot to take her into the air.

FRONT COVER: A new safety series of interest to Navy personnel begins with this issue—see the extensive report on automobile tires, page 28. Front cover art by ALL HANDS artist Michael Tuffli.

BACK COVER: Also featured in this issue as our lead article is a report of USS Nimitz on her first major operations in the North Atlantic. Photos by JO2 D. M. Browne, USN.

TASK GROUP 75





Left: Signal flags fly over the flight deck of the nuclear powered aircraft carrier USS Nimitz (CVN 68) for her commissioning. Above: The nuclear-powered guided missile cruiser USS South Carolina (CGN 37). Right: USS Seahorse (SSN 669).

The three ships of Task Group 75 (TG 75) got underway for North Atlantic operations in mid-August. Their mission was twofold: First, to operate together and gain experience as a fighting unit. Second, to allow the United States to demonstrate to its NATO allies and others the capabilities and flexibility of our maritime forces. In addition, it served as USS *Nimitz'* first extended operations into foreign waters, and as her first chance to exercise with other ships in extended ASW and AAW operations.

Although TG 75 isn't the first all-nuclear powered task group, it will serve as something of a model for the future. Two new nuclear powered carriers are under construction and other nuclear powered cruisers will soon join the large number of nuclear submarines already in commission (both U. S. and foreign). With that in mind, let's take a look at the three ships that comprised TG 75.

- USS *Nimitz* (CVN 68). Commissioned 3 May of this year, *Nimitz* is the largest and most powerful warship in the world. She is 1092 feet long, 292 feet wide and has a 95,000-ton displacement. Her two reactors can propel her at speeds in excess of 30 knots, and she can operate for 13 years without refueling. *Nimitz* has accommodations for 6282 persons, and her present crew consists of about 5000 officers and crewmen.

Embarked in *Nimitz* is a specially tailored air wing comprised of more than 70 fixed- and rotary-wing aircraft of various types, capable of conducting a wide range of operations including antisubmarine detection, fighter and tactical strikes against surface and land forces, air and electronic reconnaissance and defensive air support for task groups.

- USS *South Carolina* (CGN 37). Commissioned 18 Jan 1975, *South Carolina* is 596 feet long, 61 feet wide and displaces about 10,000 tons. Her propulsion plant moves her through the water at speeds in excess of 30 knots, and she can operate 10 years without refueling. Her complement is 545 officers and crewmen.

South Carolina is equipped with the most advanced sonar and antisubmarine weapons as well as *Tartar* surface-to-air missile launchers, two conventional 5-inch guns, *Asroc* launcher and four torpedo tubes. These provide a consolidated deterrent to attack from above, on or below the water. Additionally, she is capable of landing, servicing and launching helicopters.

- USS *Seahorse* (SSN 669). Commissioned on 19 Sep 1969, *Seahorse* is 292 feet long, 31 feet wide and displaces 3800 tons on the surface. Her propulsion plant propels her at speeds in excess of 20 knots and she can sail more than 100,000 miles without being refueled. She is manned by 12 officers and 108 enlisted men.

Designed as an antisubmarine weapons system, she is armed with torpedoes and *Subroc* missiles, and carries an advanced sonar system. Deep-diving and swift, *Seahorse* is one of the Navy's most effective antisubmarine weapons as well as a lethal weapon against hostile surface shipping.

SAILING WITH NIMITZ on NAVAL OPS in

For a desk-bound sailor in the Pentagon, a chance to sail with an all-nuclear Navy task group in the North Atlantic was like copping one of the prizes in a national TV quiz show. Well, perhaps it wasn't as exciting as winning a new car and a bundle of cash, but it did set my head to whirling.

Task Group (TG) 75 comprised three nuclear-powered vessels, including the Navy's newest nuclear carrier, USS *Nimitz*. Task Group activities included independent and NATO operations, along with visits to Edinburgh, Scotland; Wilhelmshaven, West Germany; and Portsmouth, England.

The hectic, month-long deployment opened my eyes to life aboard the world's largest and mightiest warship. I witnessed, too, just exactly what goes on behind the scenes during an international naval exercise, at least from a crewman's viewpoint.

Like most Navy people, I had been reading about USS *Nimitz* for months—following her from keel-laying to launching, through commissioning. Therefore, I expected her to be big. But when I first saw her from the helicopter carrying me out from the Virginia Capes I began to doubt her size—from that vantage point she looked awfully small. However, once I was standing on the flight deck, no doubts remained about her immensity.

In this her first deployment, *Nimitz* operated as a unit of Task Group 75 along with USS *South Carolina* (CGN 37), a *California*-class nuclear powered guided missile cruiser commissioned last January, and USS *Seahorse* (SSN 669), an extremely capable nuclear submarine designed to attack other subs.

The task group left the Virginia Capes in mid-August to cross the Atlantic by way of Newfoundland and Iceland. En route, *Nimitz*, *South Carolina* and, later, *Seahorse* carried out numerous training exercises with each other and with various NATO ships.

"A primary purpose of the unique operation," said Admiral Isaac C. Kidd, Commander in Chief U. S. Atlantic Fleet, and NATO's Supreme Allied Commander Atlantic, "is to contribute to the understanding of NATO solidarity as a positive force for peace and security in Europe."

For the first three days, *Nimitz* and *South Carolina* steamed in close proximity. Most of the time, *South Carolina* was just visible in the haze on the horizon; sometimes she was completely out of sight. The cruiser was stationed as a picket, providing advanced warning to *Nimitz*, utilizing radar, sonar and electronic support measures. Thus, it was necessary for *South Carolina* to stay far ahead or behind *Nimitz*, to best use her sophisticated electronic sensors, and provide timely and accurate assessments of possible threats to the task group. Later in the trip we were shadowed by Soviet destroyers, and our guided missile cruiser was a welcome sight as she traveled close at hand. In the early part of the

he NORTH ATLANTIC

operation the two ships carried out anti-air warfare training exercises—*South Carolina* practiced air interception, while *Nimitz* trained in air approaches and practice bombing.

Five days after leaving Virginia, *Nimitz* rendezvoused with *Seahorse*. In the days that followed, *Seahorse* was used extensively in ASW training.

Nimitz is the world's largest warship, and everything about her is big, almost incomprehensible. Her flight deck, for example, is about one-quarter of a mile long and about 250 feet wide, or about four and one-half acres. She weighs in at a fantastic 95,000 tons—that's 190 million pounds, equivalent to the weight of about 47,500 automobiles.

The ship has room for 100 aircraft, along with the machine shops, repair facilities and mechanics to keep them flying. Since she doesn't need fuel oil for her own engines, *Nimitz* is able to carry enough aircraft fuel to keep all of her planes going for many days of non-stop flight operations.

Nimitz' mess deck is one of the largest afloat. In 30 days at sea, the crew will consume some 300,000 eggs, at least that many pancakes, more than 80,000 pounds of meat and more than a few gallons of Navy coffee. She has over 6200 berths for the crew to sleep in, takes over a mile of mooring line to tie up and pays out around $900,000 in salaries each month.

Once below decks, however, the feeling of bigness disappears. Colors, compartments and passageways look like those on any other Navy ship and I almost forgot I was in *Nimitz*.

Unlike many other ships, however, the ride is smooth. Even when steaming through 12-foot seas there is very little movement, with only an occasional gentle roll. Every so often the deck would drop slightly under my feet to remind me I was in a ship at sea, but I could almost believe I was back in the Pentagon. Most of the time underway I had the feeling that she was standing still and the ocean was simply moving past her hull.

Adding to the sensation of being stationary was the almost total absence of noise. Generally, the only mechanical sound was the hissing of the air-conditioning except, of course, when jet aircraft were being launched or recovered.

I've never experienced anything quite like a jet fighter being launched from *Nimitz*. Perhaps the launch of an *Apollo* booster I once witnessed at Cape Canaveral comes closest. From the carrier's superstructure I heard the same unbelievably loud noise, and felt the same breath-hampering vibration against my chest. When an F-4J *Phantom* revved up to launch, the entire ship's superstructure buzzed. When the catapult shot the plane aloft and slammed to a stop at the end of the track, the 1092-foot long ship shuddered from stem to stern. It was an uncanny feeling.

Shortly before arriving in West Germany, Federal German Maritime Patrol aircraft flew over the task group, and provided a patrol for a Soviet escort that had been watching the ships. The following day, German F-104s allowed *Nimitz* to test her defenses by simulating an air attack. The attack also provided training for the German pilots.

Finally, 10 days after leaving the Virginia Capes, *Nimitz* anchored in Wilhelmshaven, Germany, for her first foreign port visit. *South Carolina* and *Seahorse* visited Bremerhaven.

Wilhelmshaven

The weather was warm and balmy with blue skies and white clouds over the red brick buildings of Wilhelmshaven. Ninety per cent of the city is built of brick, as the high levels of iodine in the air tend to turn stone and mortar black.

The streets are mostly cobblestone, and the sidewalks seemed unusually wide to Navymen used to American streets (most streets in Europe have wider sidewalks for bicycles and small motorbikes). The houses are clean and fresh looking. Each has a small garden and the lawns are always neatly trimmed. Wilhelmshaven was quiet and peaceful, and the people were open, friendly and very helpful with language problems.

Nimitz crewmen were offered free tours of the city, which helped them learn their way around and see a great deal more than they would have just by walking. Many American sailors took buses and trains to surrounding towns, while some rented cars and drove into the country farmland.

I rented a car that weekend to drive south into the hills and mountains. The country around Wilhelmshaven is flat and reminded me of the farming areas in Indiana. As far south as I traveled, to very small villages, Germans always stopped me and asked about *Nimitz*. It was as if all of north Germany had one thing on its mind—the great U. S. aircraft carrier then in Wilhelmshaven. Interest did prove high indeed, as some 40,000 Germans visited and toured *Nimitz* in the five days she anchored in Germany.

Nimitz and *South Carolina* again put to sea, escorted by German tugs and a small, bouncing fleet of family runabouts. The two nuclear ships then joined with *Seahorse* and seven ships of NATO's Standing Naval Force, Atlantic. Three days of antiaircraft and ASW exercises followed, and *Nimitz* refueled a British frigate, HMS *Argonaut*, demonstrating the carrier's ability to supply conventional fuel to ships at sea. Actually, because nuclear carriers have no need for fuel tanks themselves, they have a greater capability than conventionally powered ships to store fuel for aircraft or other ships.

"The amount of planning," said CDR Caccivio, "was minimal for integration of the task group and the NATO forces, due to already existing standards and procedures for working together.

"That's a major feat," he added, "when you stop

to think about the incredible amount of planning that goes into anything we do in our Navy. Within a very short time, with very few messages and communications, we can integrate as many as 10 ships and operate in excess of 12 hours in the North Atlantic.

"That's very impressive, where everyone is a stranger and there are language barriers. It means we could do what we have to do when we're called to do it."

Following the exercises, *Nimitz* and *South Carolina* dropped anchor in the Firth of Forth, at Edinburgh, Scotland. *Seahorse* docked at Rosyth, 15 miles up the coast.

Edinburgh

The Scots seemed happy that the weather was "normal" again after a long heat wave. But for American sailors who had just come from sunny, warm Germany, the cold rain and gray overcast could only be described as miserable. The weather grew so cold, in fact, that light snow fell one morning on Navymen waiting to go ashore, and on lines of Scots waiting to tour *Nimitz*. The night before, the weather had been so poor that liberty boats were secured and about 2000 crewmen spent a cold night ashore, billeted in some dated Army barracks.

Despite the poor weather, the beauty of Scotland helped me forget my numb feet. Edinburgh looks old and very traditional—a marked change from the modern buildings in Germany. The capital city is a skyline of chimneys, and the smell of coal smoke hangs heavy in the air. The original building is the Castle, which is so old that it was *restored* in the seventh century. No one really knows just when it was actually built. Edinburgh has been the home of great authors and poets down through the ages, and it has been the subject of much literature. It has a look of history that draws tourists back year after year.

During the task group's visit, Edinburgh was in the middle of its International Festival of the Arts, which runs during August and September each year. Thousands of people travel from almost every country in the world to attend the festival, and many hotels are permanently booked years in advance.

Many *Nimitz* and *South Carolina* crewmen also attended two other very special events in Scotland—the Military Tattoo, and the Braemar Gathering.

The Tattoo is a kind of concert of military bagpipe and drum bands held at the castle. The event was a sea of spectators, kilts and pipes, and the whole city resounded with the music. This year's bands included the massed bands of the Royal Marines, the Pipes and Drums of the Australian Police, the Royal New Zealand Army Band and the Beefeater Band from Canada.

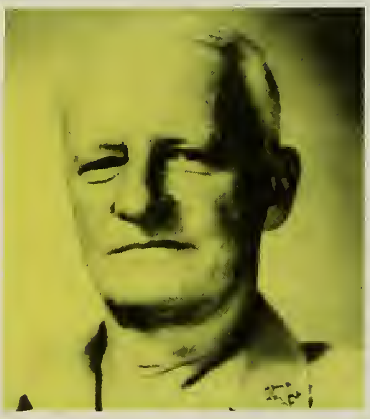
The Gathering at Braemar is an annual athletic event. Such competitions as pole vaulting, foot races and bagpiping were held, and the winners received money and a number of bottles of very good Scotch whisky. For the tug-of-war contest, *Nimitz* and *South Carolina* each fielded a team of burly sailors. In spite of their

size, they lost to two highly trained and well-equipped British teams.

In the three days of liberty, Edinburgh opened its arms to American Navymen who will long remember the wailing bagpipes of the Tattoo and the misty, cloud-covered mountains of Braemar.

Seahorse rejoined the two ships at sea, and four Royal Navy F-4 *Phantom* jets with support crews flew onto *Nimitz*. The British stayed with the task group for four days, practicing takeoffs and landings for re-

FLEET ADMIRAL CHESTER WILLIAM NIMITZ



Fleet Admiral Chester William Nimitz, the man for whom CVN 68 is named, lived a career unparalleled in the annals of U. S. naval history. For outstanding service to his country and the world he was given the highest honors, including the Gold Star in lieu of the fourth Distinguished Service Medal, decorations and awards from 13 foreign governments and honorary degrees from 19 American colleges and universities.

Chester W. Nimitz was born on 24 Feb 1885 in Fredericksburg, Tex. He graduated with distinction from the U. S. Naval Academy in 1905 and went on to serve in WW I as Chief of Staff to the Commander, U. S. Atlantic Submarine Force. Nimitz became a rear admiral in 1938 and, for the next two years, served as Commander, First Battleship Division.

In June 1939 he was appointed to a four-year term as Chief of the Bureau of Navigation (now called Bureau of Naval Personnel). Before the tour was completed, however, the Japanese attacked Pearl Harbor and Nimitz was appointed Commander in Chief U. S. Pacific Fleet. At the same time, in December 1941, he

Shipboard scenes in USS Nimitz. Photos by JO1 Chris Christensen, JO1 Merle Jacobsen, PH2 E. L. Causey and JO2 D. M. Browne.

fresher training. CDR Caccivio remarked, "It's great that *Nimitz* can absorb the requirements to train and refresh the Royal Navy this easily. Even though they had never landed on *Nimitz* before, the touch-and-goes were very successful.

To top off the training exercises, the task group met in the English Channel with ships of the Royal Navy and fighters of the Royal Air Force for a simulated battle at sea. The task group first opposed the Royal Navy ships, and then both navies joined forces against the Royal Air Force. *Nimitz* aircraft were granted permission to fly simulated bombing runs over southern England.

Success is the key word of Task Group 75's North Atlantic Ops. The three ships carried out every imaginable combination of training exercises. They operated with conventionally fueled NATO combatants and quickly integrated into one coordinated fighting force.

Following these exercises, the task group arrived in Portsmouth, England. It was cool and rainy, but the crewmen enjoyed the warmth of the famous English hospitality. They took tours around Portsmouth and trips to London. In Portsmouth harbor U. S. Navymen saw an example and reminder of naval tradition—HMS *Victory*. She is the oldest commissioned ship in the Royal Navy and was flagship for Admiral Lord Horatio Nelson at Trafalgar in 1805. The old ship of the line is completely restored, much like our USS *Constitution* at Boston.

I left *Nimitz* in Portsmouth, much impressed by her size, complexity and capabilities. The Navy I saw in my month on board is certainly a different Navy from that in the corridors of the Pentagon. My most impressive recollection was the thousands of sailors performing highly responsible tasks, and all working in harmony in *Nimitz*. It was clear that *Nimitz*' greatest strength was the 6000 men on board.

—JO2 David M. Browne

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was promoted to Admiral.

As CinCPacFlt, Nimitz' command of the Pacific Ocean complemented the Southwest Pacific area command of General Douglas MacArthur and brought land as well as naval forces under his authority. Under his command, and the commands of his subordinates—Admirals Halsey, Mitscher, Turner, Spruance and Kinkaid—were fought the battles of Midway (1942); the Solomons (1942-3); the Gilbert Islands (1943); the Marshalls, Marianas, Palaus and Philippines (1944); and Iwo Jima and Okinawa (1945).

During this period, in December 1944, he was promoted to the newly established rank of fleet admiral, along with Admirals Leahy and King.

Indicative of his leadership style was a memo he sent to Admiral Halsey during the war which said: "The Lord gave us two ends to use: one to think with and one to sit with. The war depends on which we choose—heads we win, tails we lose."

Also during that war he uttered what has become one of America's most famous quotes: "Among the Americans who served on Iwo Island, uncommon valor was a common virtue."

On 1 Sep 1945, Fleet Admiral Nimitz was one of the signers for the United States when Japan formally accepted the surrender terms on board the battleship USS *Missouri* in Tokyo Bay.

Following WW II, Nimitz served as Chief of Naval Operations from November 1945 to November 1947. In December 1947 he was ordered to San Francisco for duty as directed by the Secretary of the Navy, and in January 1948 reported as Special Assistant to the Secretary of the Navy in the Western Sea Frontier.

Nimitz later headed President Truman's commission on internal security and individual rights, was named UN commissioner for India and Pakistan and served as a regent of the University of California.

Chester Nimitz' brilliant career ended with his death in San Francisco on 20 Feb 1966. His record is an inspiration to all who choose the Navy as a career.

Checking Out With The

FLEET TRAINING GROUP

Before beginning operations with a nuclear task force in North Atlantic waters, the Navy's second nuclear carrier, USS *Nimitz* (CVN 68), underwent training at Guantanamo Bay, Cuba.

During this time, members of the crew carried out exercises under the expert eyes of the Fleet Training Group (FTG), both at general quarters and condition watches. Training included flight deck evolutions, flight operations, communications, simulated strike operations, medical exercises, deck operations, navigation and ship control.

The Fleet Training Group ship riding team consisted of officers and enlisted men (1st class and chiefs) who rode with the *Nimitz* crew to evaluate the various evolutions.

During *Nimitz* at-sea periods in Gitmo, a nucleus crew from FTG was on board at all times and available for training and answering questions from 0600 to 2300. The *Nimitz* crew received high marks during the training and so did the FTG. Upon leaving Gitmo, *Nimitz* passed on a report praising the expertise of the Fleet Training Group and the thoroughness of FTG personnel.

Facing page bottom: Repair locker members review damage control drill. Top: A mock aircraft fire is set to test the crew's response. Clockwise this page: Underway replenishment techniques under scrutiny. Marine Phantom touches down. Below: Underway replenishment operations aboard USS Nimitz. Blips on the radar screen are analyzed. First aid drills on the flight deck.

SAILORS OF TASK GROUP 75 JOIN IN
SCOTTISH

High in the Scottish Highlands north of Edinburgh, where the air is chilled and bracing, Scottish "heavies" meet every August for the Braemar Games. This year, U. S. sailors from the world's newest nuclear task force had an opportunity to participate in the meet, one of the world's oldest athletic competitions.

This internationally famous contest annually attracts thousands of visitors from all parts of the globe. It has its roots in the traditional competitions which have persisted since the first clan chief called an assembly for the conduct of clan business, military exercises and hunting nearly two centuries ago.

Braemar, believed to be as old as Scotland itself, celebrated the games' 158th anniversary this year with 30,000 spectators. In attendance were crewmen from Task Force 75—USS *Nimitz* (CVN 68), USS *South Carolina* (CGN 37) and the attack submarine *Seahorse* (SSS 669).

Undoubtedly, the stars this year, as in the past, were the heavyweight athletes who effortlessly tossed 56-pound hammers, and the pipers and drummers who seemed to shake the earth with Highland marches. The men from Task Group 75, however, added a welcome touch of Navy competitive spirit to the tug-of-war event.

Two quickly assembled teams from *Nimitz* and *South Carolina* pulled against the highly trained teams of the Queen's Royal Guardsmen and the Royal Air Force. Although they lost, the Navymen's best effort gained them a distinction few can claim—participation in the "Scottish Olympics."

The tug-of-war competition is a comparatively new

American sailors of USS Nimitz and Task Group 75 had an opportunity to witness and to participate in the famed Braemar Games in the Scottish Highlands. On these pages are scenes of the colorful event. Below: Queen Elizabeth II and Prince Philip, with the Queen Mother and members of the Royal Family are greeted by two young lassies in tartan skirts.

BRAEMAR GAMES

OLYMPICS

addition to the gathering, but it is now one of its highlights. The sport calls for tremendous toughness, endurance and teamwork.

Although the rules are simple, the training is often complex for those who aspire to be winners. Some tie a rope around the base of a young tree and pull against the bending tree trunk to build their strength. Others prefer exercises involving weights and pulleys, gradually increasing resistance as they train. A well-trained team can often topple an opponent even though it is far outweighed. This fact alone prompts enthusiastic training before major events.

Another event, somewhat more traditional, is "Throwing the Weight." In this game, the real heavies compete by heaving a 28-pound ball as far as 80 feet. A good grip is essential so most contestants rub their hands generously with resin, but resin, alone, doesn't make the grip. Shaking hands with those Scots is like placing one's hand in an iron vise!

Other events include Vaulting the Pole, Long Leaping, distance running, Bagpipe Competition, Highland Dancing, Tossing the Caber and Putting the Stone.

On hand for this year's festivities were Queen Elizabeth and the Royal Family. They arrived in the afternoon and the cold rain which had been falling most of the day stopped, as if in obeisance to the royal guests.

The games ended about six o'clock. It had been a day of bagpipes and military marches; of strong young Scotsmen tossing heavy steel balls, hammers and 17-foot fir trees; and of women wearing Highland fashions and the men in kilts. The Highlands—a place where the snow falls year 'round and ancient castles still bear the marks of 18th century battles—treated players and spectators alike to an experience they are not likely to forget.

—Story by JO2 D. M. Browne

USNS MISPILLION

MSC FLEET OILER

The transfer of selected Navy-manned support ships to Military Sealift Command for operation with U. S. Civil Service crews was designed to reduce Navy operating costs and to permit military skills to be put to use in other urgently needed areas. Here, the master of one of these MSC-manned vessels talks about the program, his ship and crew and the job they are doing.

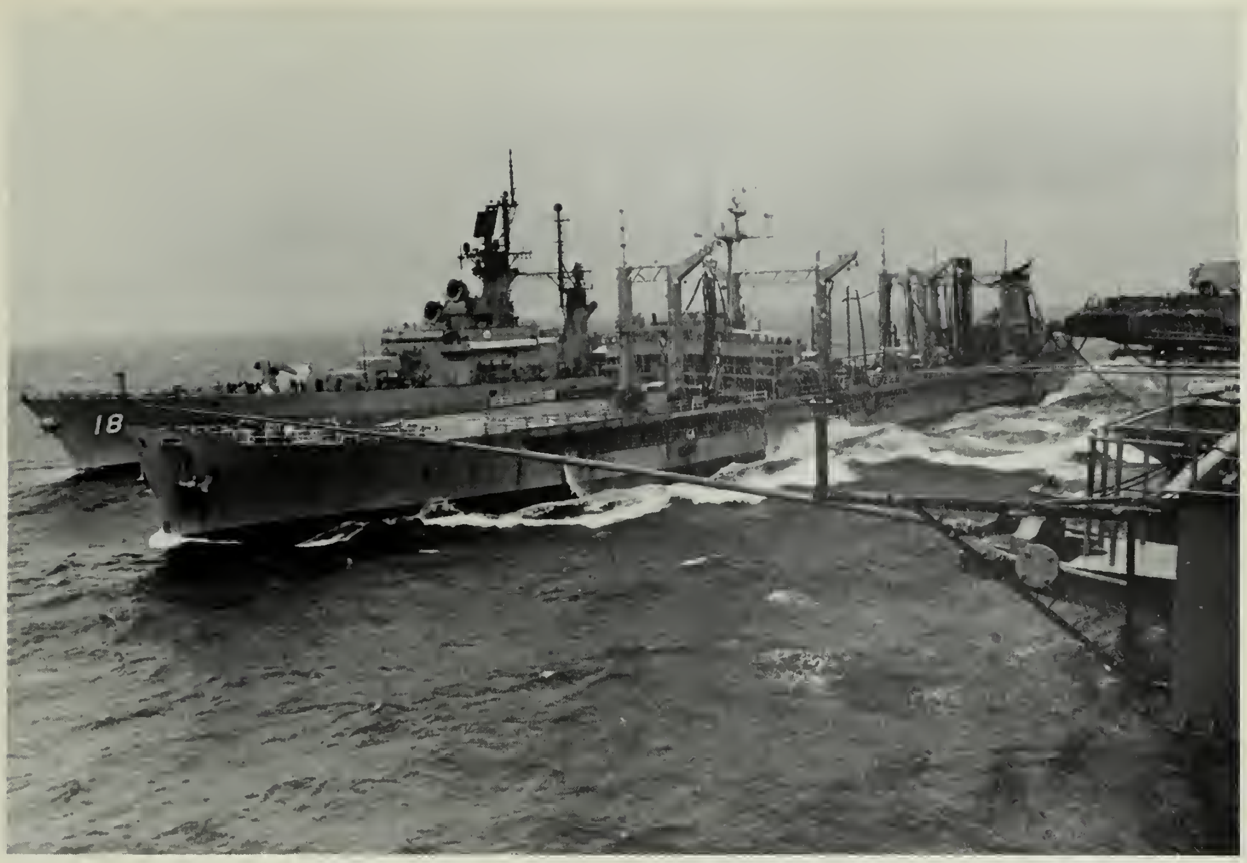
"When a customer pulls away from my ship, I want him to be completely satisfied. I want him to have all of the services I can provide." So said Captain Gottfried C. Krull while talking about his job as Master of the Military Sealift Command (MSC) Fleet oiler USNS *Mispillion*. The ex-U. S. Navy oiler was turned over to the MSC in July 1974 and is currently operating in support of the Seventh Fleet.

"I think this is an excellent program and so far it is working very well," Krull said. "There have been a few problems, but you have to expect that when you start something new. So far, we've run into nothing that we couldn't handle."

Mispillion, commissioned in 1945, is a "jumboized" oiler, that is, she was cut in half and had an enlarged midsection added to increase her cargo capacity. She currently operates with a 108-man Civil Service crew, plus a 16-man Navy detachment to operate her communications equipment and provide liaison with Fleet units. As a Navy ship she carried a 285-man crew.

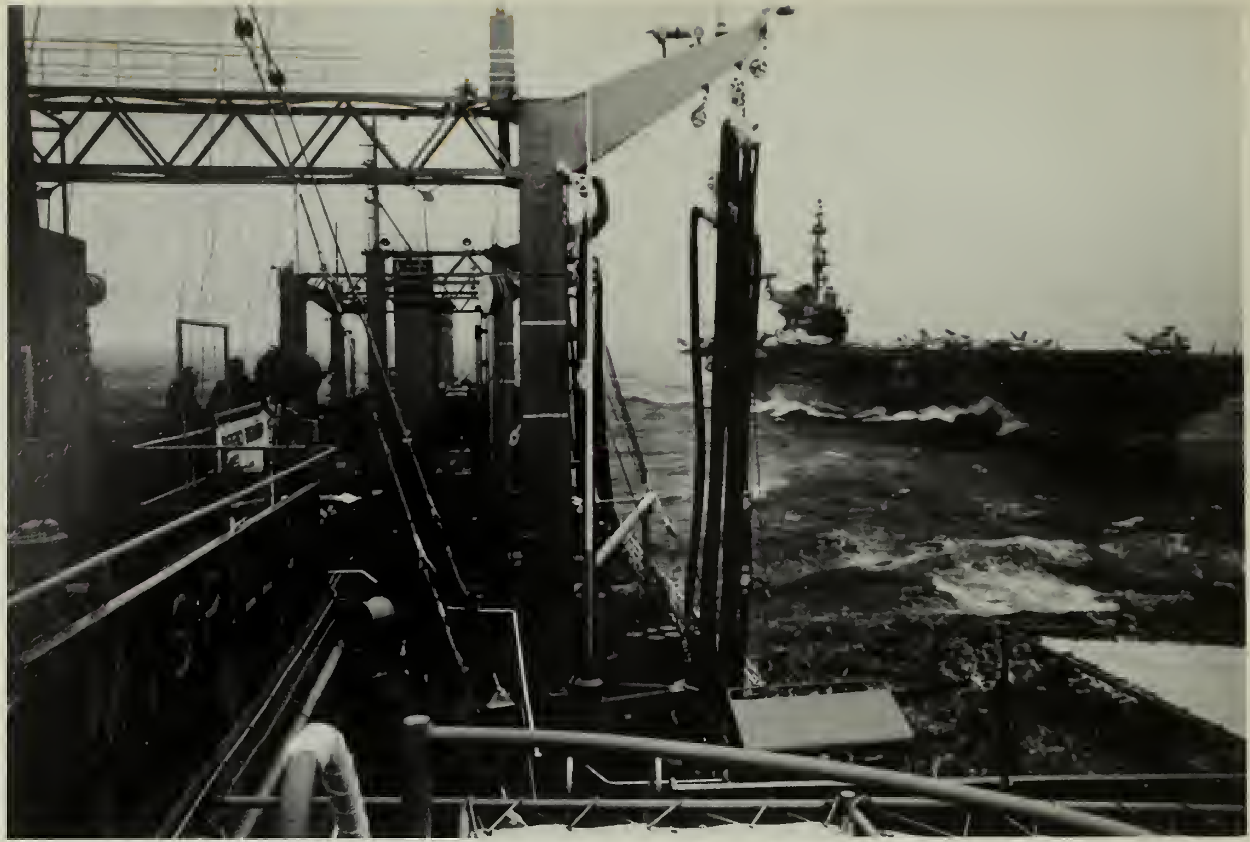
"We can do our job with fewer people, and overall, we can do it with less cost to the Navy," Krull said. When a ship like *Mispillion* is Navy-manned, it is considered a warship, which calls for a weapons department. A Navy-manned ship also requires a self-contained unit with its own administrative department. Then, with a Navy crew, you have to consider the Navy training pipeline, rotation and things like that.

"These factors don't apply to a civilian crew," he continued. "We are out here to pump fuel—that is our entire job. My men have been trained to handle two and sometimes three different jobs, so we don't need as many people. The only time we really have to come into port is when we need another load of fuel or when we have maintenance problems we can't handle at sea. These ships are economical when they are at sea. Right now, MSC-manned tankers generally put in more sea time than Navy-manned tankers."



Facing page top: Military Sealift Command fleet oiler, USNS Mispillion, refueling Navy ships in the western Pacific. Middle: Mispillion crewmen at refueling stations. Bottom: Crewmen secure a refueling rig. This page top: Mispillion preparing to replenish the guided missile cruiser USS Worden (aircraft carrier USS Midway is at right). Left: Navy Lieutenant Daniel D. Edwards, officer-in-charge of the USNS Mispillion military department. Above: Captain Gottfried C. Krull, Master of the Military Sealift Command fleet oiler USNS Mispillion, with a member of the ship's military department.

USNS MISPILLION



Top: USS Midway comes alongside to take on fuel. Above: A fueling station manned and ready. Right: A member of the military department aboard USNS Mispillion makes adjustments to the ship's communications equipment. Facing page top: Communications via flashing light during underway replenishment. Middle: The first mate keeps an eye on the compass during replenishment operations. Bottom: A destroyer takes green water as she comes alongside USNS Mispillion.

A stocky, blunt-spoken, energetic man, Krull has been sailing in U. S. government ships for 31 years.

"In 1944," he recalled, "I was waiting to join the Army as an air cadet. A couple of friends were sailing with the Army Transport Service at the time and talked me into taking one trip. I've been with it ever since. I sailed with the Army Transport Service until 1950 when the Military Sea Transportation Service, now MSC, was formed, and I've been with the organization ever since."

Krull has sailed in nearly every type of government ship in existence. His experience ranges from oceanographic research ships to break bulk cargo vessels to troop transports to hospital ships, which he sailed during World War II. His first contact with MSC's Navy fleet support mission came in May 1973 when he spent a month aboard the first MSC-manned tanker, USNS *Taluga*, as an observer. He took command of *Taluga* on 15 Jun 1973.

"I like the job," Krull said, "and I like the responsibility. The hours are longer because I have to spend more time on the bridge [of *Mispillion*] than I did on my other ships, but that's part of the job. Also, I have good people aboard this ship . . . well-trained men who know their jobs and work hard. That's the biggest part of success in this operation right there."

Although *Mispillion* is an oiler, she will be supplying other support for Fleet units under the "mini-multi support" concept.

"When we go out on special missions, we'll probably have two or three conex (storage) boxes aboard, one of which will be refrigerated," Krull explained. "We'll carry ship's store items and some food supplies. This is primarily for auxiliary operations. We can tide over the ships that we refuel until they reach a port or a regular supply ship."

For 25 years, the Military Sealift Command has provided a vital link in the logistics support chain for the Navy and the Department of Defense throughout the world. Now, with the advent of the direct Fleet support program, a new dimension has been added to the command's mission and if the performance of Captain Krull and his crew is any indication, it is here to stay.

—Story and photos by JOC Dan Hansen

'. . . Where Hearing is Seeing . . .'

SUB HUNTERS

Within the sea, hearing is seeing.

Two hundred miles off the Virginia coast, the P-3 *Orion* continues its patrol, searching for potential enemy submarines.

Wednesday, 0910: Suddenly, radar blip. "Bearing 090, ten miles." The *Orion* banks and heads for the contact area.

0916: The cause of the radar echo—a submarine. Its position, heading and speed are reported to the headquarters of Commander in Chief, Atlantic Fleet, in Norfolk. The headquarters staff knows the exact location of every friendly sub in the Atlantic. The new contact is added. The data is relayed to a carrier near the contact area. The order—proceed and investigate.

The order is received aboard the carrier. The task force commander's first problem is time. His planes will arrive over the target's estimated position an hour and 20 minutes after the sub was first sighted.

"Altimeter, 29.94 . . . ." The carrier's ready rooms. The aircrews learn about the contact area 80 miles away: cloud cover, visibility, air and water temperatures, search procedures.

"On the flight deck, remove all tie-downs, wheel chocks and loose gear. Stand by to launch aircraft."

Moments later, S-2 *Trackers* are catapulted from the carrier's flight deck and make their way toward the contact area. They will soon be joined by SH-3 *Sea King* antisubmarine warfare helicopters. Data collected about the target will be channeled through the carrier's combat information center (CIC). All reports go there for immediate evaluation. Command decisions depend on a total, up-to-the-minute picture.

1035: CIC receives a message from the S-2s. They are over the sub's estimated position and are swapping data with the P-3. The original contact has been lost. They must regain it.

The *Trackers* try a sonobuoy. After entering the water, these detection devices lower a hydrophone and raise an antenna. In a quiet sea they can pick up and broadcast a target several miles away. This moment—no target.

Throughout the search, the S-2s also use magnetic detection gear (MAD). Radar is useless against a submerged target. A sensing device in the tail boom of the *Tracker* will detect large, metal objects fathoms below, be they subs or sunken wrecks. Nothing yet.

1110: The helicopters join the search. They combine moderate aircraft speed with the ability to hover over a target area and dunk a sensitive sonar ball. Unlike a ship's sonar, the ball is free of surrounding, man-made noises. But this morning, its pulses find nothing. The *Sea Kings* try several areas. Still no contact. Every antisubmarine warfare mission demands patience, determination, more patience.

Above: A pilot of Helicopter Antisubmarine Squadron Five (HS-5) keeps his aircraft positioned in lifeguard station as flight operations are conducted aboard USS Independence (CV 62). Facing page top: A crewmember of HS-5 checks a squadron SH-3D Sea King helicopter. Middle: Two HS-5 crewmen man the fuel line as their Sea King helicopter takes on fuel from the frigate USS Elmer Montgomery (FF 1082). Bottom: An HS-5 pilot at the controls.

Miles away from the search area, the submarine moves about on the ocean's surface. It has evaded the planes for two hours. What are the prospects now?

Meanwhile, the *Trackers* widen their search. Spook—an unidentified surface contact by radar. Possibly a sub. By the time the *Trackers* reach the estimated contact position there is no trace of the target.

"Pilot, radar. Spook became sinker, five miles."

Now the hunters concentrate on magnetic detection. "MAD man, MAD man."

An S-2 has a contact that classifies the object below as a submerged submarine. It also reveals the sub's direction and approximate speed. Twelve minutes later, the contact vanishes again. Sometimes this game of cat and mouse is played for hours, even days.

The helos' time is running out. They can stay on station only half as long as the *Trackers*. A second relay of *Sea Kings* from the carrier must relieve them.

1320: The skipper of the sub decides it's time for another look around. He has his boat brought to periscope depth.

Aboard the helo. Spook—another radar fix. Target five miles.

"Bogey upstairs. Go deep, all ahead."

Too late. The helicopters are not far off. They swoop down on the area and lay a pattern of sonobuoys as they follow the ocean's surface.

The carrier immediately begins picking up signals which give the sub's exact location. The information is relayed back to the SH-3s. As the data comes in over the ultrahigh-frequency channel, the *Sea Kings* again descend. They level at 150 feet and turn to the wind. They drop to 45 feet where they hover and drop their sonar.

For several hours the submarine contact is held. Then the sonar echoes become confused. Above, they wonder. Seaweed? Fish? A wall of cold water? All will affect the signal. The confusion of echoes gives the sub time to escape. The carrier is informed that all contacts are lost. The hunt begins again.

Hours later the sub takes advantage of nightfall to take on the fresh air it will need to stay down the next day. "Commence snorkeling, commence snorkeling."

The task force covers a wide area. Strategy pays off. An S-2 gets a fix and reports it to the carrier. "Radar contact bearing 210 degrees, seven miles from original datum."

A destroyer has since joined the airborne subhunters. In the morning, sonar technicians aboard the tin can are still listening to the sub below.

Below, they listen to the hunters above. The sub didn't have time to take on sufficient air for an extended stay under the surface of the sea. The breath is now being literally forced out of it.

Thursday noon: The sub hunters have held the boat continuously for more than 16 hours. Below, men and batteries are exhausted.

1350: Over 20 hours after the sub was first sighted, another hunt is over. In wartime the target would have been destroyed. But this target was an American sub assigned to test antisubmarine warfare units. One skill was used to sharpen another in this prearranged ASW exercise.

Visit with a Flag Waver

"Signal in the air. Man your bags," cracks through the air and electrifies the quiet signal bridge into a beehive of precision activity.

Shirtless Navy signalmen perspiring in the high-noon tropical sun scramble into action and rapidly pull brightly colored signal flags and pennants from tightly packed flag bags.

"Corpen zero nine zero!" shouts Chief Signalman Richard D. Jones as he peers intently at the replenishment ship through powerful binoculars.

"Get the lead out and get that signal in the air! Do you guys want that oiler to think the flagship has a bunch of strikers for signalmen?"

Perched high in the superstructure, 40 feet above the flight deck of USS *Okinawa* (LPH 3) Chief Jones, staff signalman for Commander Amphibious Squadron One, speaks proudly about his rating. "Visual communication is the first form of nautical communication and a visible voice of command."

Signalmen must develop the ability to send and receive messages and recognition signals by flashing light, semaphore and flag hoist. In addition to maintaining their visual signaling equipment, they become expert on the proper display of flags and pennants, national ensign during gun salutes, and honors and ceremonies.

Acknowledging that high-speed teletype and radio voice communications handle the bulk of Navy communications, the chief quickly countered, "That's right, but in many instances, flag hoist, semaphore and flashing light are a much wiser choice for inter-ship communications."

He pointed out that during wartime or periods when ships must travel undetected, they are often prohibited from using electronic equipment because enemy listening devices can pinpoint their location.

"Man, that's when we're really busy. But the more work you give a signalman the happier he is," he continues. "There's a lot of competition among signalmen and all of us think we're a little better than that 'skivvy waver' in the next ship."

Playing the devil's advocate, I prodded him with a barb by suggesting that visual signaling was a dying art.

He reacted as expected as his face reddened and his temperature appeared to rise. After a silent pause, he blurted out, "I don't agree with that, at least not on this ship."

Then referring to his boss, Captain Robert N. Congdon, Commander Amphibious Squadron One, Jones said, "The commodore is really hot for tactical maneuvering by flag hoist and flashing light."

Commodore Congdon supported the chief. "We've found that we're capable of maneuvering this task group faster by flag hoist than we can by radio messages." He added that he even witnessed a first in his career. "We conducted an entire underway replenishment—eight receiving ships and two replenishment ships—going from 0500 in the morning until 1600 in the afternoon without using one single radio transmission." Then with a smile, "In my opinion, that's a real achievement."

Chief Jones chimed in with some statistics. "Last month, we handled over 800 flashing light messages and 425 flag hoists. I can't imagine how many semaphore messages and informal 'talk between ships' type messages were sent out."

I interrupted, "O.K., I believe. I believe. Now tell me how skivvy waving really got its name."

—Story by LCDR Tony Demarco
—Photos by PHC Don Hays and LCDR Demarco

Far left: Sending a message by semaphore from a perch high in the superstructure. Top left: Chief Signalman Jones makes selection from the flag bag. Top right: A wide-angle view of the signal bridge of USS Okinawa. Above: Flashing light in use.

A Visit With The NAVY

Left: Navy wives provide reading material for hospital patients. Above: A Navy wife makes a friendly visit to some elderly shut-ins. Facing page top: A Navy nurse demonstrates the care of infants for expectant Navy wives.

Some single sailors are fond of kidding Navy "brown baggers" by saying, "If the Navy wanted you to have a wife, they would have issued you one." The Navy wife, however, issued or otherwise, is a vital part of the Navy family. As such, she needs to keep abreast of what is happening in her husband's career field and needs to have an outside interest for those days, weeks and months when he's deployed. The Navy Wives Clubs of America (NWCA) fills these needs and much more.

Founded in 1935 and chartered in 1936 with Navy wife Ethel Lyn Green as first president, NWCA has become the country's only national organization chartered specifically for wives of enlisted Navy, Marine Corps and Coast Guard members.

With chapters stateside and overseas, NWCA is guided by a National Board, elected annually and consisting of a president, vice president, secretary, treasurer and five regional presidents. In addition, 13 national chairmen are appointed annually to coordinate specific project areas. Among these are two goodwill ambassadors, one each for Europe and the Pacific. These two posts were established to foster stronger lines of communication between overseas clubs, assist members being transferred and advise clubs on special projects involving host country nationals.

In carrying out her many duties, today's NWCA national president, Barbara Howard, is a letter writer who may petition the commandant of a naval district or some local chamber of commerce for support whenever a

WIVES CLUBS

Of America

new member club is formed. She represents NWCA at official functions, votes on recommendations submitted to the national board, helps plan conventions and makes official calls on those in a position to promote NWCA programs.

Mrs. Howard recently attended a Secretary of the Navy briefing in Washington, where she met with the Chief of Naval Operations, Under Secretary of the Navy, Deputy Chief of Naval Personnel and several other high-ranking Navy, Marine Corps and Coast Guard officials. President Howard spoke to each one about some problems facing military families today. Subjects discussed included housing, medical facilities for dependents, CHAMPUS benefits, dental care legislation and commissaries.

NWCA has many ways of helping people. One project in which all members take an active part is the NWCA Scholarship Foundation. Established in 1952 with two $400 grants, this foundation now makes 17 annual awards of $600 each. These funds are designed to help pay college and vocational training bills for children of Navy, Marine Corps and Coast Guard enlisted men on active duty (see box).

NWCA also sponsors several educational activities, such as lectures, films and reports. Some of the topics covered include: CHAMPUS, legal affairs, housing, seapower, fire hazards, career counseling, home economics, safe driving, energy conservation, cancer, Red

Cross lifesaving, survivor benefits, commissaries and exchanges.

In addition, NWCA issues a monthly mimeographed publication entitled Navy Wives News. Designed to keep the entire organization abreast of other club activities, it contains a wealth of information, including letters and tips from each national officer and national chairman, reports on pending legislation of interest to Navy wives and information from the Navy/Marine Corps Council in Washington, D. C., Navy Wives News also carries a special column, "Members on the Move," which assures a welcoming committee for an NWCA member and her family at the husband's next duty station.

As explained by the national president, NWCA is an organization with a sense of responsibility, an appreciation of civic duties and enjoyment of camaraderie, mixed with a pursuit of knowledge. One could say it is an energetic group, as evidenced by this random sampling of NWCA activities last year:

- Worked with civic groups screening children for amblyopia (lazy-eye blindness).
- Collected redemption-type coupons which were traded for a kidney dialysis machine and minibus. These items were then donated to a hospital and orphans' home, respectively.
- Served as volunteers for Red Cross, Navy Relief, Wifeline (D. C. area), Mental Health Agency, Muscular Dystrophy, March of Dimes, Heart and Cancer Fund drives, Tuberculosis Association and many others.
- Took part in Navy Day, Memorial Day, Loyalty Day, Veterans Day, Armed Forces Day celebrations and worked with base and civic leaders for the Bicentennial.
- Sponsored and worked with civic groups to educate people against child abuse, drug abuse, alcoholism, etc.

The donation of time, money and materials was and continues to be endless. NWCA constantly strives to make things just a little bit better for everyone.

Mrs. Howard feels that wives today play a very important part in the lives of the men and have become a definite "retention factor." She stresses that NWCA not only wants to see wives happy and content, but also proud to be partners with men serving their country.

She explains that some husbands consider a club such as NWCA as merely a "coffee clutch." They fail to see the added value their wives could be to their careers if allowed to participate in NWCA activities. In the words of Mrs. Howard, "We might find time to clutch that coffee cup . . . while we offer the hand of friendship and our time for helping others."

A Navy wife for 18 years, Mrs. Howard has been active in NWCA activities for nine years. She says, "I only wish I had been affiliated with the organization when I was a new Navy wife." For her, "NWCA" spells more than Navy Wives Clubs of America; it spells satisfaction in being informed and knowing whom to take a problem to when one exists.

NWCA's motto is: "They also serve who stay and wait." Members of this group find that involvement in worthwhile base and civic activities fill that motto "to a tee."

NWCA Scholarships

The following eligibility requirements govern the award of NWCA scholarships to children of Navy, Marine Corps and Coast Guard enlisted men on active duty, retired with pay or those who have died while on active duty or in retirement:

- Applicants must be graduates of accredited high schools (or equivalent) or qualify for graduation before the beginning of the academic year for which scholarship is sought.
- Applicants must have "reasonably sound" scholastic standings, be physically capable of completing studies and be of good moral character.
- Individuals selected must be in need of financial assistance to further their education.
- Students already in college may apply.

Scholarship grants may be renewed if the student's work is satisfactory. For applications, write to the Chief of Naval Personnel (Pers-73), Navy Department, Washington, D. C. 20370, or to the secretary of any local NWCA chapter.

Facing page top: Members of NWCA, New Orleans, are given a lesson in the use of fire extinguishers. Bottom: NWCA sponsors the NAS New Orleans, La., annual Easter Egg Hunt for youngsters. Above: National President of Navy Wives Clubs of America, Barbara Howard, wife of AMS1 B. J. Howard.

TRANSACTIONAL ANALYSIS

What's That ?

"Have you finished painting the deck?"

"Look, I'm working on it. Who do you think I am, Superpainter? Leave me alone and I'll get it done, OK?"

These two are heading for a big argument, hard feelings and probably a ruined day. It doesn't need to be. If the painter had taken a few seconds to think about the question he might not have been so hardheaded. He could have replied, "Not yet, but I should have it finished by chow." That response would have diverted a lot of trouble.

We've all been in similar situations. Getting along with others under the pressures of daily living is sometimes difficult, and the added pressures of many people in close quarters on board ship make getting along even more difficult. How can one cope with it all?

In 1957 a psychiatrist named Eric Berne revealed his solution to the problem. The concept he formulated is called transactional analysis or, more commonly, TA. It is a simple, straightforward way of dealing with life which is expressed in common, everyday language. In the past several years TA has become extremely popular with dozens of books, films, lecture groups and TA classes sprouting up across the country.

Basically, TA states that each of us has three distinct individuals registered like tape recordings within our brain. The individuals, or ego states, are called the Parent, the Adult and the Child. They begin to develop at a very early age and remain with us all our life.

These tapes are not simply memories, but are real feelings of past experiences, events, places and people which are recalled and which govern our actions. When we respond to others we often call forth hostile memories of similar situations and think and act (come from the ego state) as our memory tapes dictate.

But, we don't have to be slaves of the past. By being aware of our feelings we have the power to stop the instinctive response of one ego state and force ourselves to respond from another or more appropriate one. We may not be able to change our personality or our feelings about the situation, but we can control our reactions to it. In that way we can make a potentially hostile exchange become friendly and productive.

TA is now being used by psychiatrists, psychologists and other professionals to treat the mentally ill and is applied in fields such as alcohol and drug rehabilitation, marriage counseling, race relations and education. With its simple concepts and common language, TA can be used successfully by anyone in his daily life at home, in business and other social situations. With the peculiarities of their environment, Navy men and women have many opportunities to put TA to work for them.

One such Navy situation is living in the confined quarters of a ship at sea. All too often the rigors, boredom and restrictions of shipboard life lead to personality clashes and flaring tempers. Why? Because otherwise Adult men sometimes allow an inappropriate memory tape to play under the stress.

Anyone who goes to sea knows, for example, that getting up for midwatches is going to be part of his routine. Generally, the fact is accepted and everyone tumbles out with no complaints when his turn comes. Occasionally, however, you'll hear a man who is awakened for a midwatch let loose a stream of abuse aimed at the poor seaman shaking him out: "Why did you wake me five minutes early?" "You don't have to shake me so hard!" "Don't shine that d--- flashlight in my eyes!" And so on. There you have it, he's slipped out of his Adult and into his Parent.

Sure, nobody likes to be awakened in the middle of the night to stand on a cold, wet bridge wing for four hours, but that's the name of the Navy game and he knows it. If he'd taken just a moment to get his head together he would have turned on his Adult tape, gotten up with no complaint and not have hasseled the innocent seaman.

How many times have you been upset by a leading petty officer telling you to get a haircut? Well, there's your Child ego coming through. "He can't tell me how

TA - A TYPICAL

An Outsider may think that a transactional analysis (TA) group is, in reality, nothing more than a seance in which spiritualists communicate with the unknown. Such is not the case. It's a discussion group in which the members probe the meaning of one's inner drives and emotions, along with the feelings one may have towards spouse, job or surroundings.

What's a typical transactional analysis meeting all about? To gain an insight, read on. The following is an outline of a typical meeting—

A dozen people sit in a circle talking. Not long ago they were strangers, now they feel they've become close friends. These Navy men and women and their dependents are part of an East Coast transactional analysis (TA) discussion group organized by their base chaplain. They have been meeting one night each week to watch a film (an eight-part series entitled "Learning To Live"), to discuss what they've seen in terms of their own lives, and to learn the methods of TA.

The group, mostly married couples, have become relaxed in each other's company. Their discussions cover personal problems, their families, themselves, friends, their job, and military life. Often, very deep personal feelings are expressed, sometimes to the surprise of spouses. During the discussions they take a real interest in others in the group, help them solve problems and, through the guidance of the chaplain, learn the concepts of TA.

One film, for example, deals with feelings. The chaplain, or group facilitator as he is called in TA parlance, leads off by asking each participant to recall an incident during the past week that made him angry.

One woman recalls how she became angry at her husband for not fixing a broken table leg. Another person recalls how he became angry at an officer for to wear my hair." "Why is he picking on me?" "Doesn't he have anything better to do than go around bugging people?" Before you cut loose, stop and compute all the data. Remember that the PO is just enforcing the regulations we all agreed to abide by when we signed on the dotted line. Analyze the regulation and you'll remember it was made for a reason.

By doing this you can turn on your Adult tape and avoid a lot of trouble and hard feelings. If you don't think you need a haircut, go ahead and discuss it on an Adult level with the PO, but simply to think he is giving you a hard time because he enjoys it is childish.

That brings up the question of leadership. Military leadership is, unfortunately, often strictly a Parent-Child relationship. "I outrank you, therefore I am the Parent and you are the Child. You *will* do as I say!" Children have a natural tendency to rebel against parents, and anyone who is treated like a child will act like one. The job may get done, but it isn't leadership!

On the other hand, just because an order is given doesn't always mean it's patronizing. The one receiving an order, or any personal communication, can accept it as coming from whatever ego state he wants. How he takes the order and which tape gets turned on depends on him. He, not the order giver, determines if the transaction is to be agreeable or not.

Leadership doesn't have to be a Parent-Child relationship. The leader should say "This needs to be done, here's why . . ." He should remain open for discussion and then let the person do the job in his own way. The person receiving the order will, then, more readily accept it as an Adult and, to the surprise of some, get the task done quickly and correctly.

In what we call a combat situation it seems reasonable that the Parent-Child type of leadership is necessary. But is it? There isn't time to explain the whys or wherefors of an order, of course, but if the order recipient is in his Adult, as he should be, he will accept the order and act on it without question because he understands that's the way it has to be.

The effect the Navy has on our personal lives can also be made more comfortable through effective use of TA.

When a man returns from a deployment, for example, the relationship between him and his wife is all candy and flowers—until he learns she has dented the car's fender and overdrawn the checking account. His first inclination probably will be to come on as a Parent and lecture her on the merits of safe driving and careful bookkeeping. But, if he takes a closer look at the situation he may realize she has had a hard time of it during his absence—the kids were sick, an unexpected bill came up, the refrigerator broke down and a rumor spread that his ship had been extended at sea. She's been a nervous wreck, and his Adult should tell him that things aren't so bad, it's good to be home and to go easy and help her work it all out.

TA is an effective method of learning to live with people by solving disputes before they begin. The Parent-Adult-Child aspect of TA is just a portion of the whole concept. It also deals with topics such as time structures, personal feelings, psychological games and life scripts. The method can work for anyone, and there is a definite place for it in the Navy. Perhaps transactional analysis should be taught in some of the Navy's training programs.

In any case, the next time someone asks if you've finished painting the deck, take a moment before answering to get into your Adult. Everyone will be happier if you do.

—JO1 Tom Jansing

GROUP SESSION

giving him a job he didn't think he should have had.

Zeroing in on one individual, the chaplain asks, "How did you react to your division officer's order? Did you deal with the feeling right there on the spot, or did you save the feeling like trading stamps to be cashed in later?"

The group's attention focuses on the situation. Everyone tries to discover how and why the person reacted as he did, and how he should have reacted.

More questions follow: How can you deal with these stamps? When the situation occurred, did you ask yourself, "How do I feel about this?" Is it an old feeling? Have you felt it before? Where; with whom? Did you react to this situation over the job, or to some other situation in the past? Which ego state did you come from, the Adult, Child or Parent? How can you get rid of these old feelings in order to deal with the here and now (or, are there any stamps you should burn)?

As the discussion proceeds each person has his own moment of anger in mind. By working on one particular problem, they are also working on their own. At the same time they are also learning the language and methods of TA. Ultimately, the laundry is hung out to dry and they reach the adult conclusion that we should try to deal more straightforwardly with the feelings we have about the situation at hand.

Through the other TA films and similar weekly group discussions these people are discovering some basic problems in interpersonal relationships. They are increasing their awareness of the power and potential for self-direction and seeing ways to change unwanted patterns of behavior in order to achieve more honest and fulfilling relationships. They are, in short, learning to live—and it's an exhilarating feeling. It's also the whole point of studying TA.

Interested ? Read on .....

The following books are suggested reading for anyone interested in learning more about transactional analysis:

I'm OK—You're OK, by Thomas A. Harris
Study Guide for I'm OK—You're OK, by Richard Blackstock
Born to Win, by Muriel James and Dorothy Jongeward
Games Alcoholics Play, by Claude Steiner
What Do You Say After You Say Hello, by Eric Berne
TA Made Simple, by Claude Steiner
Sex in Human Loving, by Eric Berne
Transactional Analysis in Psychotherapy, by Eric Berne
Introduce your Marriage to Transactional Analysis, by Leonard Campos and Paul McCormick
Success Through TA, by Jut Meininger
How to be Your Own Best Friend, by Bernard Berkowitz

ALL HANDS CONSUMER/SAFETY SERIES

WHAT EVERY SAILOR SHOULD KNOW ABOUT TIRES

When you entered the Navy you were told that you had joined an exclusive traveling society. What you may not have been told was that much of your future travel would be with you in the driver's seat and on your own set of wheels.

Navy men and women generally rack up about 15,000 miles a year in their personal autos traveling to and from the job, on leave and while executing orders. Much of the travel is completed under pressing schedules to meet certain time frames such as reporting and arrival dates.

A lot of thought is given to the maintenance and care of one's vehicle to avoid breakdowns and accidents, making sure that the car won't overheat on a lonely stretch of highway and that the brakes—among countless other things—will operate, especially in an emergency. However, when it comes to tires, most of us are prone to give them merely a passing glance, along with a kick or two—all amounting to a 20th century ritual akin to a medieval good-luck charm or potion.

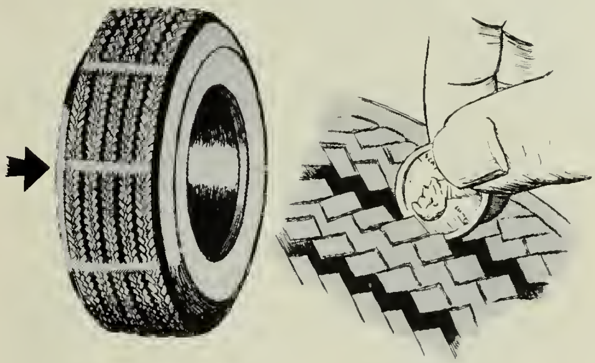
Tire care demands much more. Those four-foot-long lengths of tire touching the pavement constitute your car's only contact with terra firma. To put it another way—four strips of rubber are all that separate you from eternity.

This doesn't mean that tires account for most of today's vehicular accidents—on the contrary. According to a massive study by an Indiana University research group for the Department of Transportation, 83.2 per cent of automobile accidents are caused by "human factors," or driver errors. That lets tires off the hook in more than four out of five accidents. Fact is, vehicular factors—brakes and tires—caused only 4.2 per cent of the 1305 accidents covered in the study.

In the accidents where tires were involved—underinflated or bald tires were found to be the cause. Properly maintained tires were not factors in any of the mishaps and, interestingly, neither tire nor wheel failures (due to manufacturing defects) figured as even possible causes.

Investigators said their findings ("Tri-Level Study of the Causes of Traffic Accidents") support anti-bald-tire regulations as part of regular state inspection procedures. To date, 36 states and the District of Columbia now require a minimum tread depth of 1/16-inch, while California mandates a 1/32-inch minimum.

Federal law backs up tire safety by requiring "treadwear indicators" or "wear bars" to be built into all new passenger tires since 1 Aug 1968. A "treadwear indicator" takes the guesswork out of tire maintenance; if they're showing (flat bands across a tire's surface) it means the tire is worn to 1/16 of an inch. It's time, then, to replace the tire or tires.



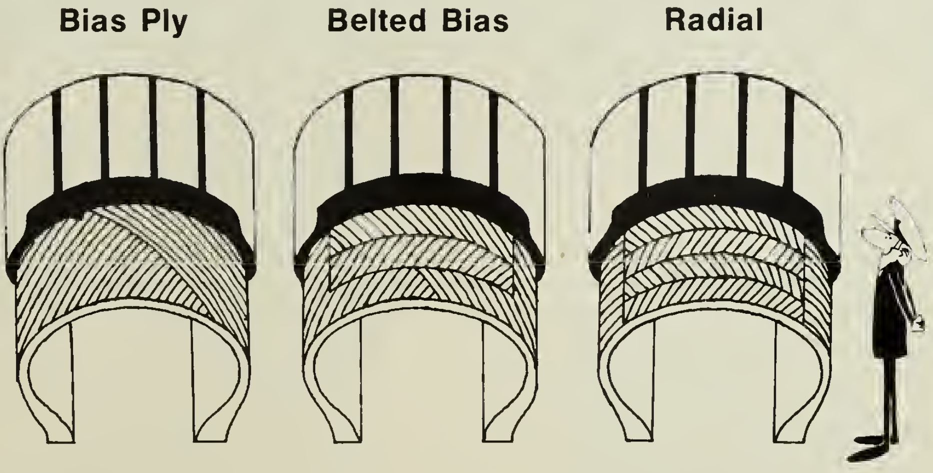
There's still the "penny test," an older means of checking tire wear. Place a penny into a groove of the tire with Lincoln's head down. If the top of Lincoln's head shows above the tread, the tire is worn below the minimum requirement. Tires with "treadwear indicators" showing and those flunking the penny test" greatly increase your chances of having a serious accident. In fact, such tires worn past the 1/16-inch level are up to 44 times more likely to suffer disablement than new tires through flats and blowouts.

On wet roads, tires with adequate tread depth funnel water through the grooves, leaving rubber—those vital foot-long pieces—in contact with the road. On the other hand, bald or worn tires with shallow grooves are more likely to skim over the film, sending the car into a skid in a phenomenon called "hydroplaning." Needless to add, it becomes difficult, if not impossible, to control a car's direction when the front end loses contact with the road.

Basically, there are three types of tires—the bias ply, belted ply and radial. The bias is the conventional tire which has been around since the 1920s. Cords in the plies, or layers, which make up the body of the bias tire, crisscross at an angle called the "bias angle," usually about 30 to 40 degrees to the centerline. Cords may be arranged in two or more (even number) plies depending, in general, on the strength desired in the finished product. The design provides rigidity in both the sidewall and tread, but bias tires squirm more and tend to run hotter than the belted bias or the radial.

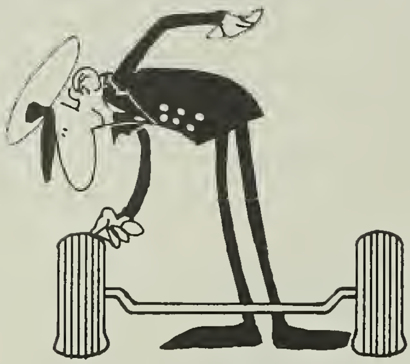
As with the bias, the cords of the belted bias are also arranged in a crisscross pattern, but they also have two or more layers of fabric or "belts" under the tread. The cords in the belt also run at an angle—about 25 degrees to the centerline.

This construction provides a sidewall stiffness similar to the bias tire, with the increased strength and stiffness in the tread. Body cords are made of rayon, nylon, or polyester; belt cords are made of fiber glass, rayon or



steel. The belted bias tire squirms less than the bias tire, runs cooler and gives more mileage.

Radial tires, first introduced domestically in 1965, can always be identified by the letter "R" imprinted on the sidewall giving size information, such as, "ER78-14." In the radial, the cords in the body run at right angles to the centerline and may be arranged in one to three plies. Over this radial section is added a belt, made of up to four plies, the cords of which run at an angle of about 15 degrees to the centerline.



The radial flat look

This gives a tire with flexible sidewalls that, even when fully inflated, still looks as if it needs air. This tire, despite its low profile appearance, has great stiffness and strength in the tread area.

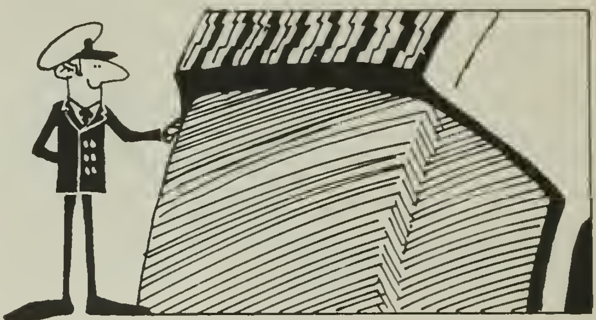
In some radials the belts are made of steel—in others, fiber glass or rayon. The radial, like the belted bias, has minimum squirm, runs cool and provides long wear.

The tire industry states that radial tires reduce gasoline consumption significantly. At current levels of use, radial tires are estimated to be saving more than 400 million gallons of gasoline per year. Savings would increase to two billion gallons per year if 50 per cent of all automobiles and 25 per cent of all trucks were on radial tires and to more than 5.2 billion at 100 per cent utilization of radials by all vehicles.

In addition to the gasoline-saving potential of the radial tire, there are certain benefits related to increased radial tire usage. These are: longer tire life, resulting in a potential for some savings of raw materials, and superior safety-related performance characteristics such as better traction and cornering.

Cords in the sidewall of the tire are usually made of the artificial fibers—nylon, rayon or polyester.

Polyester has good strength, is insensitive to water and does not "flat spot"—that is, flatten out when the vehicle stands in the same spot as happens when a car is left parked overnight. Nylon is resilient and is resistant to heat and water but, even though it is used in most racing and aircraft tires, it tends to flat out. This causes a bumpy ride for a few miles. Flat spotting, however, is not a safety problem.



Artificial fiber cord

Rayon is the oldest of the man-made fibers—has good strength, dimensional stability and abrasion resistance. Rayon has one fault; it tends to degenerate if it is continually exposed to water. This could cause trouble if a cut exposed the tire's cord to the weather, and particularly troublesome if a cut went undetected in a wet season. On the positive side, rayon does not flat spot.

Cords used in the belts of belted bias or radial tires must provide maximum stiffness and resistance to deformation. The main purpose of the belted bias and radial designs is to reduce or eliminate "squirm" and maintain a flat footprint, providing maximum traction and wear. For this purpose, three types of cord have proved successful:

- *Steel wire* makes very strong belts because they stubbornly resist distortion. Such a tire tends to maintain a flat tread pattern and run comparatively cool. They provide excellent traction and give maximum wear for a given thickness of tread. Needless to add, the principal use of steel belts is in radials.
- *Glass fibers* have excellent tensile strength, good dimensional stability and resist flexing. A tire with fiber glass belts tends to run cool and provide long wear.
- *Rayon* is the only textile fiber used in both belt and carcass plies. Rayon has the stiffness and insensitivity to temperature changes necessary for use in belts, and also has the ability to stand up under the flexing to which carcass fibers are subjected. Rayon belts are competitive with glass.

The trend in passenger car tires has been from a high, narrow cross-sectional profile to a low, wide profile. Today, some passenger car tire cross-sections are almost twice as wide as they are high.

A plus for wide tires is that they naturally provide a wider "footprint" and also better cornering. But very wide tires may present problems. Here are just a few:

- They may not fit your rims.
- They are harder to steer on cars without power steering.
- Carried as spares, they take up a great deal of trunk space.
- The ride may be hard.

If you have an older car and are thinking of buying broader tires—a fad today with younger people—have your dealer check to see if your fender wells are wide enough to permit turns without rubbing.

Various types of blowout- and puncture-resistant tires are on the market. Some have a steel safety belt underneath the tread. Some have an inner tire separated from the main body of the tire by an air space. Others use a sealant to prevent the escape of air because of a puncture.

In some of these "premium" tires there is a tendency to increase heat buildup; some others are difficult to balance satisfactorily.

In a puncture, an object penetrates the tires and permits the air to escape, usually without doing extensive damage to the body of the tire. If the tire is run while flat, it will probably be destroyed. Even a piece of wire or a sliver of glass can produce a slow leak which eventually causes a flat. Such leaks should be repaired as quickly as possible.

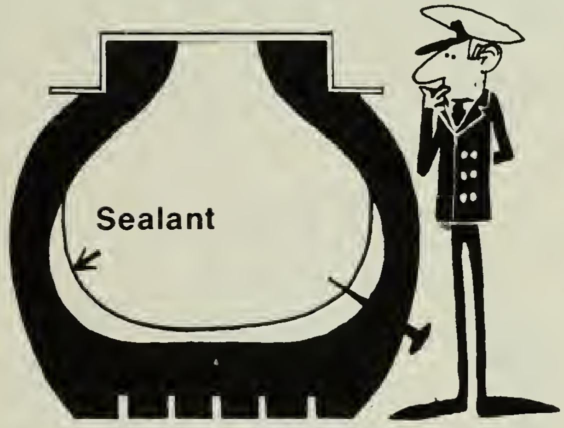
In a blowout, however, the cord gives way and the tire suddenly deflates. Most tires are not reusable following blowouts. A blowout may be caused by a slow weakening of the cord as a result of flexing, or by impacts with rocks, potholes or curbs. Blowouts are especially dangerous if they occur at high speed or on a curve. A blowout on a front tire produces a hard, steady pull, while on the rear, it causes a dangerous weaving motion.

Snow tires, a special type, have a deep, open tread which digs into the snow for traction. Tread design varies with the kind of conditions you expect to drive in.

- For intermittent snow and dry roads they have deep snow tread around the edges and a conventional tread along the center.
- If you expect rain during much of the winter, get a snow tire with open channels running around the center of the tread design. This helps prevent hydroplaning.
- For areas which get a lot of ice and snow, the whole tread is deep and open.

For winter driving, most snow tires can have metal studs inserted into them. Check your state law before you get studs, because there is some evidence that they damage road surfaces and some states limit or forbid their use.

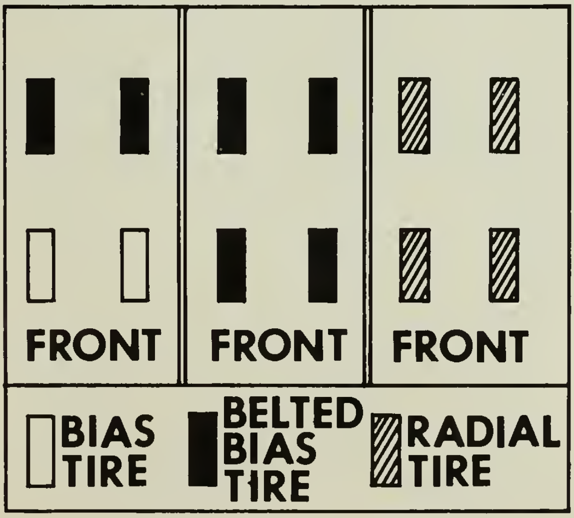
When getting studs, about 100 per tire will probably do the job, and no more than 150 per tire should be



Mixing Tire Types Can Cause Problems

If you mix bias tires with belted bias tires, mount the bias tires on the front.

Do not mix radials with other tires unless the tire manufacturer specifically recommends it.



Conventional snow tire

Studded snow tire

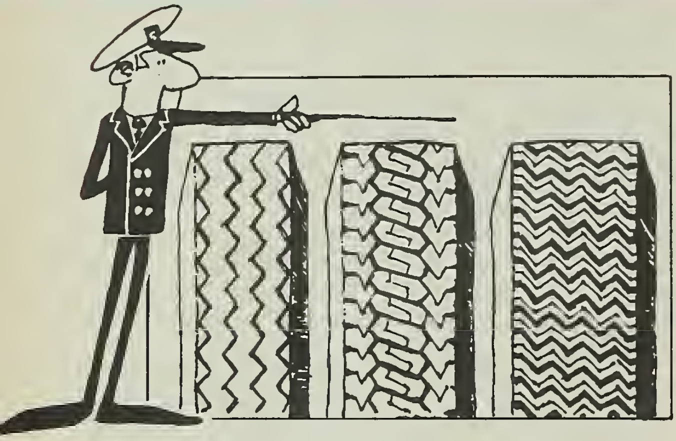
used. Too many studs will reduce traction on wet or dry roads.

Snow tires wear faster on dry pavement than regular tires, and some are not recommended for high speed driving. Also, if you have radials on your car you should buy radial snow tires. Before buying any snow tires, check with your dealer to be sure you're getting the ones best suited to your area and type of driving.

Incidentally, when it comes to buying snows, experts do not normally recommend mixing different types of tires on your car. Mixing them may cause the car's handling characteristics to change and lead to dangerous situations.

If you use radials, they should be on all four wheels unless the tire manufacturer specifically states differently. Belted bias should be used on all four wheels also, but may be mixed with plain bias tires. In this case, the belted bias should be on the rear and the bias on the front. Never use different types of tires on the same axle.

—J. F. Coleman



CHOOSING TIRES

When you go out to buy tires, there are three principles you should keep in mind:

- Choose a tire strong enough to stand up under the maximum loads you intend to carry, over the roads you intend to use.
- Choose a tire designed to hold its footing and keep its footprint flat and stable through curves and corners at maximum speeds you intend to drive.
- Choose tires designed to give the best performance under the combination of circumstances you expect to encounter while they are on your car.

Strength is important—it helps avoid blowouts. Tires take a terrific beating at today's high speeds, even over first-class roads. Hitting stones, potholes or uneven joints in the pavement at 55 mph causes a tremendous strain on tire cords and fibers. When they break, the tire blows.

Tire strength is also important in load-carrying ability. Passenger cars are used to haul a wide variety of loads. One day it might be just the weight of the car and driver, another day the car may haul a load of kids to school. On vacations the family car becomes a truck with its trunk and roof full of heavy luggage or camping equipment. Or the old buggy may become a tractor to pull a trailer or boat. It all takes strong tires.

Footing ability is another important consideration. When you go around a curve or make a sharp turn, it is only that small area of tire touching the ground which allows your car to obey the steering wheel. The size of your tires' foot is also important because it is the only thing carrying the weight of your car and its load, at the speeds you drive in all kinds of weather and road surface conditions.

Choosing for circumstances means you must get a tire for your kind of driving—Do you take long trips at interstate highway speeds, or is most of your driving done around town? Do you expect to drive in deep snow, slush or ice, or is most of it done on clear, dry streets? Different tires are designed for different circumstances that you should keep in mind when buying.

One important factor you must consider when buying tires is the price. Today, this may be one of the most important factors influencing your choice. The smart thing to do is buy tires that fit your needs, even if they cost a little more than you expected. It will pay in the long run through increased tire wear and less trouble. It may even save your life.

With all these variables and all the different choices available, the question is: Which tire should I buy? The best thing to do is let a reputable tire dealer help you. Armed with the knowledge of your car's weight, the loads you expect to carry, the type of driving you will do, the weather and road conditions you are likely to encounter and the blow your pocket can afford, he will be happy to work with you to find the best tire suited to your needs.

EVERY SAILOR SHOULD KNOW ABOUT TIRES

Once you've bought the tires you feel are right you'll have to treat them properly to get maximum wear and safety from them.

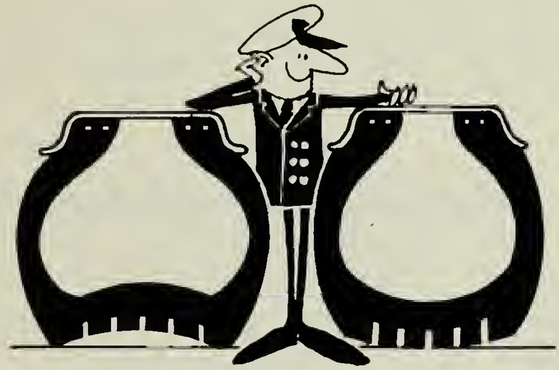
Nearly every motorist knows that new tires—either the first set on a new car or a replacement set on an older car—should be broken in by staying under 60 miles per hour for the first (or next) 50 miles. But did you know that the same procedure—not more than 60 mph for 50 miles—should be followed when a new spare tire is first placed "on the road?"

What you're doing is allowing the many complex elements in the tire to adjust gradually to each other and function as an integral unit.

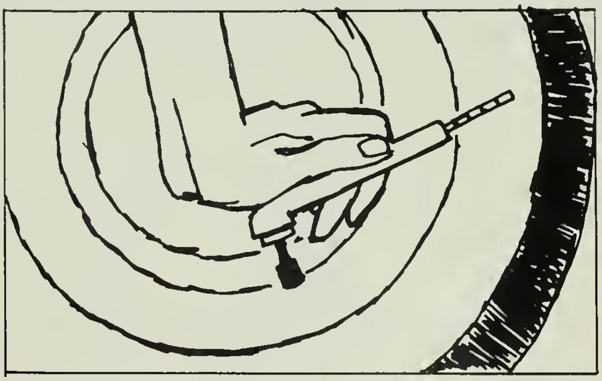
There are many more things you can do to prolong the life of your tires. One of the most important, and easiest, is to keep them properly inflated.

Underinflated tires tend to flex too much and run too hot, thus reducing their life. They also take a concave shape on the road surface which causes the edge tread to wear faster than center tread. On the other hand, overinflation causes the tire to take a convex shape and wear the center tread faster than at the edges.

Either too much or too little inflation may reduce traction or cause uneven braking, both of which can cause you to lose control of the car.



Underinflated **Overinflated**



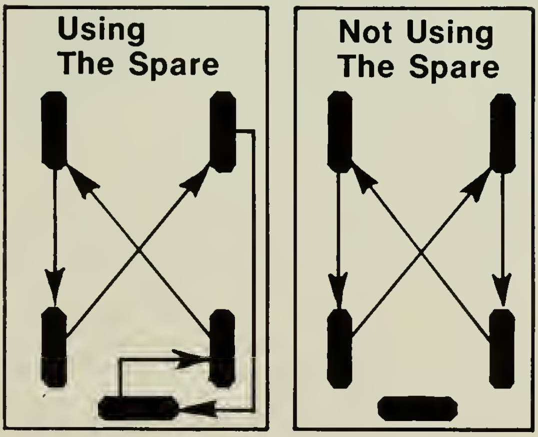
Tire pressure should be checked at least once a month—and don't forget the spare while you're at it. Follow the recommended pressures given in your owner's manual, and make the checks before you set out, while the tires are still cool. National Bureau of Standards tests indicate that pocket gauges are much more accurate than service station air pump gauges. Money spent to buy a good pocket gauge will be returned by extended tire life through proper inflation.

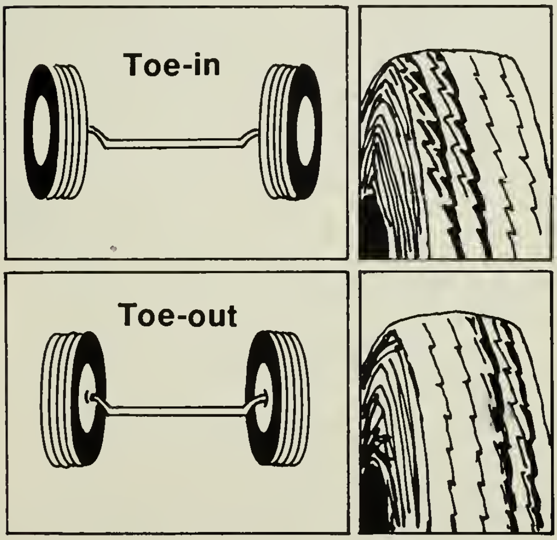
Tire rotation should also be a regular part of tire maintenance. In city driving, front tires tend to wear faster due to cornering; highway driving is harder on rear tires. Rotating them about every 5000 miles distributes this wear more evenly and gives you more mileage out of the whole set. Again, consult your owner's manual for frequency and methods of rotation for your car and the type of tires used.

The mechanical condition of your car, particularly of the front end, can also affect tire life.

- If your front end is out of alignment your tires will toe in, causing tread wear on the outside edge, or toe out, causing wear on the inside tread.

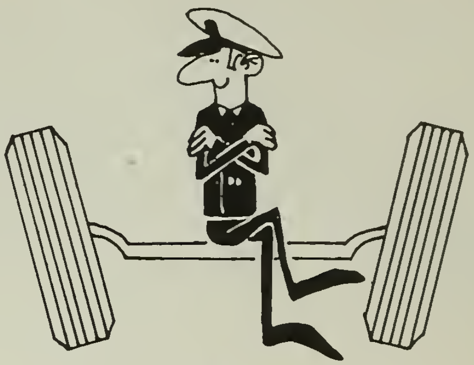
Tire Rotation





- Improper camber, or the vertical angle the tire makes with the road surface, causes uneven wear too. Tread will wear on the outside if the top of the tire leans out; on the inside if it leans in.
- Brakes which are poorly adjusted or which grab can cause tires to wear unevenly. An out-of-round brake drum can cause tread to wear quickly at one spot on the tire.

Unbalanced



Camber

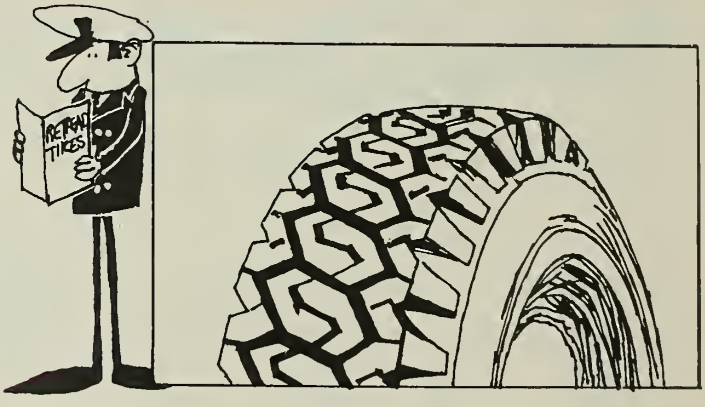
- Wheels that are out of balance vibrate and add to tire wear. All four tires should be balanced, especially if your car has independent suspension. Vibration and resulting tire wear are also caused by worn wheel bearings, worn shocks, loose tie rods or wobbly wheels.

If uneven or excessive wear shows up on any one of your tires, have your car inspected—it probably needs service.

Tires are among the most expensive items on your car. Choosing the proper tires and maintaining them properly will save you money in replacement, repair and gas mileage. It may also save your life.

—JO1 Tom Jansing

RETREAD TIRES



If it's tire-buying time and you're feeling a squeeze in the wallet, you may be wondering how you can get a good set of rubber without going into hock. Have you considered retreads? Before you scoff at this suggestion, read on.

Retread tires are used by 98 per cent of the world's major airlines. They are approved by both the U. S. Air Force and the Federal Aviation Administration for their safety and performance features. In addition, the Environmental Protection Agency is studying the feasibility of equipping all federal vehicles with retreads. Trucks and off-the-road vehicles are also heavy users of retreads, and they have to keep rolling or they're out of business. These are pretty good endorsements, but there are more reasons to consider retreads for your family car.

If you decide to use them, you'll be in good company. One of every five passenger car tires sold in the United States is a retread. The reason is simple—they sell for less than half the price of an equivalent new tire

EVERY SAILOR SHOULD KNOW ABOUT TIRES

since 70 per cent of a tire's cost is in the casing.

In addition, there are some hidden savings in buying retreads. Oil-based products are rising in cost, and it takes four and one-half fewer gallons of crude oil to retread a tire than to make a new one. About 40 million Americans bought retreads last year and saved the country 180 million gallons of oil. Also, the cost of picking up old tires from our rivers and roadways is reduced by recycling them. Retreads make economical sense by saving your wage dollars and your tax dollars.

OK, so they save money, but how good are they? To put it simply, a good retread will deliver the same mileage as an equivalent new tire and, as we've said, be just as safe. As long as the tire's casing is not damaged, it can be made into a good retread. In the past 10 years automated machinery and new retread methods have vastly improved the quality.

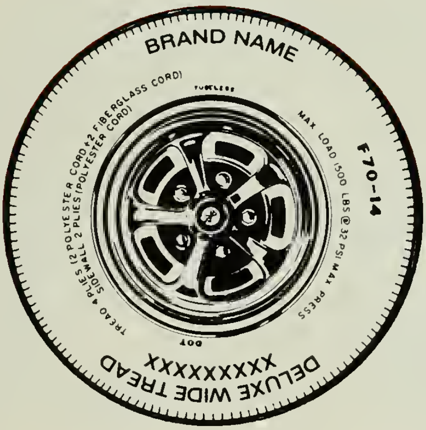
If you think retreads make sense and decide to buy them, go to a reputable dealer. He'll get his retreads only from a shop which does quality work and inspects used tires carefully before retreading them.

You might also consider taking worn tires in yourself to be retreaded, since you know what kind of use they've had. This is the cheapest way to get new rubber on your wheels. Shop for a retreading firm which offers a warranty. Most retread warranties are similar to new tire warranties as to workmanship, materials and defects.

If you would like more information on retreads, the Tire Retread Information Bureau has published a consumer booklet entitled, "A Retread May Be Your Best Tire Buy. Ask the Experts." You can get a copy by writing to TRIB, P.O. Box 2602, Washington, D. C. 20013.

—T. J.

LETTERS AND NUMBERS ON TIRE SIDEWALLS


BRAND NAME
TUBELESS
TREAD 4 PLIES (2 POLYESTER CORD+2 FIBERGLASS CORD)
SIDEWALL 2 PLIES (POLYESTER CORD)
MAX LOAD 1500 LBS @ 32 PSI MAX PRESS
F70-14
DOT
XXXXXXXXX
DELUXE WIDE TREAD

Next time you scrub your tires, get a good look at those mysterious numbers on the sidewalls. What appears to be a bunch of gibberish actually tells you a great deal about your tires, once you learn how to interpret the information. Here's what those letters and numbers mean:

F78-14. This is the tire size. There was a time a few years ago, when this information was all figures as, 6.00X16 or 7.50X14. Letters are now used from A through J. The A stands for the lowest size on the old scale and the J now identifies the largest size. In this case, the F replaces the old 7.75, meaning, too, that the cross section or air chamber of the tire measures 7.75 inches diagonally.

The 78, in our example, means that the tire's tread is 78 per cent wider than it is high. Other series width numbers are 70, 60 and 50. The lowest number identifies the widest tire—the 50 series being ultrawide.

The 14 stands for 14 inches or the radial measurement of the wheel. It means that this tire will only fit on a wheel with a 14-inch radius. If your car has 14-inch wheels, you have no use for a tire size number ending in 13 or 15.

If our example had an R in it as, **F78R-14**, the R would stand for radial. All radial tires are identified with an R.

LOAD RANGE B. This indicates that the tire has four plies or four layers of nylon, polyester, or what have you, between the carcass and the outside rubber. Plies are added in twos—B means four-ply, C means six-ply, and D means eight-ply. You buy tires for the type of driving you expect to do. If you drive your car over good roads with little or no loads being carried, then a B load range is sufficient. If you constantly load down your station wagon or pick-up truck and drive over rough roads, then you need a much greater load range tire.

MAX. LOAD 1500 LBS @ 32 PSI MAX. PRESS. This indicates the tire's load limits and maximum cold inflation. Your owner's manual explains how much pressure your tires should carry to haul certain loads.

4 PLIES UNDER TREAD (2XXX CORD) . . . This tells what the cord is made of—again, the number of plies, and the cord's material.

TUBELESS. Manufacturers have to state on the tire whether it is tubeless or a tube type tire.

DOT XXXX XX XXX. This certifies that the tire complies with Department of Transportation tire safety standards. The ID Numbers, the Xs in this example, tell who's the manufacturer in the first two numbers. The remaining numbers tell size, type and date of manufacture. When you buy a tire, the dealer is required by federal law to record your name, address and this identification number from the tire. —J.F.C.

from the desk of the Master Chief Petty Officer of the Navy

People Who Care

My most enlightening experience since assuming the job of Master Chief Petty Officer of the Navy has undoubtedly been my introduction to the workings of the Bureau of Naval Personnel (BuPers).

To Navy members serving in the fleet, the word "BuPers" often conjures up images of a castle on a hill, white pillars, a bureaucratic papermill, spit and polish, brass, bigness, busy telephones, and perpetual motion. While some of these images are true about BuPers, others are more perceived than fact.

In reality, BuPers is housed in a World War II-vintage building located in Arlington, Va., very close to the Pentagon. The structure, often referred to as the Navy Annex, has four floors in each of seven of its eight wings, and three stories in the eighth. The building is an imposing one, accommodating not only the Bureau of Naval Personnel, but also the offices of the Judge Advocate General, the Navy Inspector General, and Headquarters, Marine Corps.

On the Navy side, there are approximately 800 enlisted personnel, 550 officers, and 1350 civilians working under the direction of the Chief of Naval Personnel (CHNAVPERS), Vice Admiral J. D. Watkins. CHNAVPERS is responsible for planning and directing just about every phase of a Navy member's career. Every personnel management action made by CHNAVPERS requires an analysis of that action's effect on fleet readiness, the Chief of Naval Operation's number one priority.

To accomplish this mission within BuPers, CHNAVPERS utilizes the expertise and leadership of 10 assistants:

- The Deputy Chief of Naval Personnel (Pers-1).
- The Assistant Chief of Naval Personnel (ACNP) for Personnel Plans and Programs (Pers-2).
- ACNP for Financial Management and Management Information (Pers-3).
- ACNP for Officer Development and Distribution (Pers-4).
- ACNP for Enlisted Development and Distribution (Pers-5).
- ACNP for Human Goals (Pers-6).
- ACNP for Personal Affairs (Pers-7).
- ACNP for Performance and Security (Pers-8).
- Chief of Chaplains (Pers-9).
- ACNP for Naval Reserve (Pers-R).

Each of these assistants and the organization he directs has a specific area of responsibility which contributes to the overall mission of CHNAVPERS. And, I have found that each of these organizations is working diligently to assure that our Navy is maintained at the highest possible level of readiness.

One of these subdivisions, Pers-5, deals solely with enlisted personnel and is the organization within BuPers which influences the career pattern of Navy enlisted personnel more than any other. Pers-5, currently under the direction of Rear Admiral W. B. Warwick, initiates, develops, implements, and exercises control of policies dealing with enlisted assignment, retention, career enhancement and motivation.

More specifically, Pers-5 evaluates manning priorities; inventories enlisted personnel; maintains liaison with the fleet; makes assignment decisions; authorizes schooling, favorable separations, continuation on active duty, Fleet Reserve transfers, rate conversions (STAR, SCORE, etc.), DPPO, SRB and Pro Pay; develops enlisted advancement and performance evaluation standards; monitors the assignment of women; administers the E7/E8/E9 selection boards and the Quality Control Review Board; provides answers to Congressional and special inquiries; and so on and so on. Whew!

As you can see, Pers-5 controls or influences virtually every facet of a Navy enlisted member's career—a big job that requires long and often difficult hours, as well as dedication to duty and close attention to detail.

Since I have been here, I have come to respect highly your detailers in Pers-5, as well as the other decision-makers in this group of topnotch individuals. They can be heroes or goats in your eyes depending on how you react to their decisions. By direction of CHNAVPERS, each detailer must consider fleet readiness when making assignment decisions. Fleet readiness is also the number one priority of the detailers. But, I can assure you that the detailer always does his best to adhere to the desires of the individual, even though individual desires cannot be fulfilled in every instance.

You must realize that these people making the decisions in Pers-5 are your shipmates. They too have served in the fleet. They understand family separation, the desire for education and a permanent home, and the personal problems that can affect a Navy member's career. With these "people problems" in mind, your detailers must nevertheless fight the daily battle to maintain fleet readiness.

Every personnel decision that is made, whether about assignments, Fleet Reserve, humanitarian assignments (HUMS), advancement, or SRB, directly or indirectly affects fleet readiness. These decisions which often influence your personal life are thus doubly difficult for your detailers when viewed in this light.

And all organizations within BuPers face this dilemma. Decisions are made each day which alter the lives of Navy men and women throughout the fleet. For instance, in Pers-6, important decisions are made about equal opportunity, drug and alcohol rehabilitation, leadership management, and uni-

MCPON Robert J. Walker

forms. At the same time, Pers-7 is making judgments concerning BEQ management, family housing, messes, and family services. And in Pers-3 we find hundreds of people collecting statistics relating to Navy men and women, as well as preparing, storing, examining, and updating service records. Pers-3 also maintains the new Enlisted Records Review Room, where you (or one of your shipmates with your written permission) can review your service record to verify the accuracy of its contents.

I have highlighted only some of the myriad functions of BuPers. The Chief of Naval Personnel is also responsible to the Chief of Naval Operations for many other factors influencing the careers of Navy men and women.

So, BuPers is a bureaucracy, a real beehive of activity. To the uninitiated, BuPers is another Disneyland, a huge puzzle palace. But BuPers serves a purpose, and that purpose is you. The procurement, training, motivation, and utilization of Navy men and women remain among the most important functions of our modern Navy. Remember, the Navy is more than ships at sea. Fleet readiness also means people readiness, and that's what BuPers is all about.

BuPers will always be many things to many people, but when you come right down to it, BuPers is people—people who care.

VOLUNTEERS NEEDED FOR SUBMARINE DUTY

The submarine service is short of storekeepers, hospital corpsmen, yeomen and personnelmen in paygrades E-5 and E-6. Billets are open in attack (SSN) and fleet ballistic missile (SSBN) subs homeported in New London, Norfolk, Charleston, San Diego and Pearl Harbor.

If you're interested, submit a request in accordance with the Enlisted Transfer Manual. Additional information can be obtained from local submarine force career counselors, or the enlisted rating coordinator for submarines at BuPers, by phoning Autovon 224-1014.

U. S. CAPTURES INTERNATIONAL NAVAL PENTATHLON CROWN

U. S. Navy captured the pentathlon championship at the International Council on Military Sports (CISM) naval games held recently in Sweden.

Lieutenant (jg) Robert Baird, SEAL Team One, and Hull Maintenance Technician 3rd Class Chris Springborn, Underwater Demolition Team 12, took the gold and bronze medals in individual competition to pace the U. S. victory. LTJG Baird also set a CISM record in the lifesaving contest by retrieving a weighted dummy and towing it 75 meters in one minute, 9.5 seconds.

The naval pentathlon, one of 22 championships sponsored by CISM each year, includes an obstacle race, lifesaving, seamanship and swimming contests, and an amphibious cross-country race. In this 17th annual contest, teams from Argentina, Brazil, the Netherlands, Norway, Sweden, Turkey, the United States and West Germany participated.

CEREMONIES HELD FOR FOUR NEW SHIPS OF TWO NEW CLASSES

USS Dwight D. Eisenhower (CVN 69), the Navy's second Nimitz-Class carrier, was launched last month in ceremonies at Newport News, Va. She was christened by Mrs. Mamie Eisenhower, the President's widow.

Concurrent ceremonies marked the keel-laying for Carl Vinson (CVN 70), third of the Nimitz-Class nuclear carriers. She is named for the former Georgia congressman who, during his 50 years in the House of Representatives, served as Chairman of the Naval Affairs Committee and the House Armed Services Committee.

In Pascagoula, Miss., USS Spruance (DD 963), lead ship of the new class destroyer, was recently commissioned.

The same week, USS David R. Ray (DD 971), ninth of the planned 30 Spruance-class DDs, was christened. The ship is named for Hospital Corpsman 3rd Class David R. Ray who was posthumously awarded the Medal of Honor for heroism while serving with the First Marine Division in Quang Nam Province, Vietnam.

HOSPITAL CORPSMEN NEEDED TO FILL 'C' SCHOOL VACANCIES

Openings currently exist in several "C" school medical courses. These include nuclear submarine medicine, nuclear medicine, operating room, special operations and medical deep-sea diving technical programs. Quotas can be obtained from BuMed (Code 34).

BuMed also announced that the length of the course for the Pharmacy Technician "C" School has been reduced from 36 to 23 weeks.

briefs navy navy navy navy

- DEADLINE NEARS FOR FILING CHAMPUS CLAIMS FOR 1974

CHAMPUS users are reminded that the deadline for filing 1974 claims is near. Claims for care, services and supplies provided during 1974, filed after 31 Dec 1975, cannot be considered for payment. This rule will hold true for future years as well.

In addition, those who received services or supplies last year from a civilian source which has agreed to submit a claim directly to CHAMPUS should check to see that it has done so. If the civilian source has not filed the claim, or cannot file it by 31 December, you should make arrangements to do it yourself. CHAMPUS officials suggest you don't wait until the last minute to file since unexpected delays might prevent your claim from getting in the the mail in time to reach CHAMPUS offices before the deadline.

- ALBANY NAMED NEXT 6TH FLEET FLAGSHIP

USS Albany (CG 10) was recently named as successor to USS Little Rock (CG 4) to be Sixth Fleet flagship. Albany, now homeported in Norfolk, is to move to Gaeta, Italy next summer to assume her new duties. Little Rock, which has been in the Med since August 1973, is scheduled to return to the U. S. for a routine overhaul at the Philadelphia Naval Shipyard.

- FOUR ELECTRONIC AND AVIATION SERVICE RATINGS TO BE DROPPED

Plans to change the Electronics Technician and Aviation Machinist's Mate rating structure were recently revealed by the Chief of Naval Personnel. At a future date, not yet announced, ETN and ETR service ratings will be dropped, and personnel now assigned those ratings will revert to ETs. In the same way, ADJ and ADR service ratings will also be eliminated and become part of the general AD rating.

The change is being made for two reasons: ETN/ETR job skills are no longer restrictive enough to support these service ratings. The ADR designation adversely affects the career pattern of personnel who must change to jet engine repair as the Navy eliminates its reciprocating engine aircraft. Appropriate NECs, if needed, will be used to identify specialized qualifications within the two general ratings.

Plans for the changes are still being developed, and a BuPers Notice will be issued when the time and procedures are firm. It is anticipated that there will be no immediate effect on personnel, training, advancement exams or billet identification.

- BUPERS SETS NEW EXTENSION POLICY FOR E-3s

BuPers recently announced a new policy for E-3s allowing them to extend on active duty without having passed an E-4 exam. The move was made to avoid a heavy loss of seamen who enlisted after September 1972.

The new policy allows all E-3s approaching the end of their obligated service who are otherwise eligible for reenlistment to extend for 12 or 24 months. The length of extension depends on the career objective (CREO) category of the rating the E-3 desires. Those opting to extend can meet professional growth requirements necessary to reenlist; those deciding not to extend will be separated at their EAOS.

WOMEN TO BE ADMITTED TO THE SERVICE ACADEMIES

President Ford has signed a bill authorizing the admission of women to the three service academies. Under plans released by the Naval Academy, women will be incorporated into the brigade of midshipmen with as few changes as possible made to existing procedures. Admission requirements for women will be the same as for men, with minor adjustments made to the physical standards. The number of women admitted will be determined by the Secretary of the Navy. No changes in the academic program are anticipated. However, legal restrictions against assigning women to ships will necessitate an expansion of the Summer Training Program. The women will live and work as members of the brigade. They will be housed in the same dorm as the men, and will be assigned to companies throughout the brigade rather than to an all woman's company. Their military duties and responsibilities will be identical to their male counterparts'. Women will participate in the same basic physical fitness programs as men, with some adjustments made in standards because of the physiological differences between the sexes. Women will be required to participate in the intramural sports program under the same policies as men, and they will be allowed to compete in all intercollegiate sports except football, lacrosse and wrestling. Uniform requirements will be set prior to the entry of a woman to the Academy in July 1976.

FLEETWIDE, NAVAIR BATTLE EFFICIENCY PENNANTS FLY

Four ships recently won awards in fleetwide battle efficiency, antisubmarine warfare and gunnery competition.

USS Barry (DD 933) and USS Fresno (LST 1182) were awarded the 1975 Atlantic and Pacific Arleigh Burke Fleet Trophies, respectively. The trophies are given each year to a ship or aircraft squadron in each fleet which demonstrates the greatest improvement in battle efficiency. Runners-up in the Atlantic Fleet were USS William H. Bates (SSN 680) and Fighter Squadron Eleven. Pacific Fleet runners-up were USS Midway (CV 41) and USS Permit (SSN 594).

USS Garcia (FF 1040) was named the most proficient Atlantic Fleet surface ship in antisubmarine warfare for FY 75. She was cited for excellence in the areas of passive sonar capabilities, coordinated air and surface tactics, weapons firing performance and reliability of shipboard equipment. Runner-up in the NavSurfLant ASW competition was USS Barry (DD 933). Other ships nominated were USS Miller (FF 1091), USS Leahy (CG 16) and USS Donald B. Beary (FF 1085).

USS Gurke (DD 783) was named the Pacific Fleet's "top gun" winning the James F. Chezek Memorial Gunnery Award for the highest score in gunfire support qualifications. She achieved an average score of 91 out of a possible 100 during quals held at the Tabones Range in the Republic of the Philippines. The Chezek award rotates each year between the Atlantic and Pacific Fleets.

The FY 75 Atlantic Fleet Battle Efficiency Awards in naval aviation were recently announced. This special recognition is given to ships and squadrons which have demonstrated the highest degree of combat readiness during the previous year.

In the ship category, this year's battle efficiency pennant went to

USS Forrestal (CV 59). She also received awards for her operations, engineering and aircraft intermediate maintenance departments.

USS Franklin D. Roosevelt (CV 42) received awards for her air and communication departments; USS John F. Kennedy (CV 67) for her supply and medical departments; and USS Saratoga (CV 60) for her weapons department.

E-winning aircraft squadrons were: Fighter Squadron 11, Light Attack Squadron 105, Medium Attack Squardon 176, Reconnaissance Attack Squadron 6, Carrier Airborne Early Warning Squadron 123, Patrol Squadron 5, Air Antisubmarine Squadron 24, Helicopter Antisubmarine Squadron 3, Helicopter Antisubmarine Squadron Light 32 and Fleet Reconnaisance Squadron 4.

USS Richard K. Turner (CG 20) and USS Sampson (DDG 10) recently won the NavSurfLant FY 75 Anti-Air Warfare Award. The trophy, sponsored by the Charleston Chamber of Commerce, is presented annually to the combatant within the Atlantic naval surface force which demonstrates superior proficiency and readiness in AAW. Selection is based on inspection and exercise results, and firings at the Atlantic Fleet missile range.

• MASTER CHIEFS MEET IN WASHINGTON CONVENTION

Seventeen Master Chief Petty Officers of the Fleet and Force recently concluded a three-day convention in Washington, D. C. The purpose of the annual convention was to bring fleet personnel problems to the attention of senior Navy officials and to draw up recommended solutions to those problems. A BuPers official said the unique meeting allowed the MCPOFs to receive maximum exposure to a wide variety of subjects, as well as to top officials.

Meeting with the Chief of Naval Personnel and other key BuPers officers, MCPOFs at this year's convention talked about professional standards, uniform affairs, BEQ management, Fleet Reserve separations, women's equal opportunities, and compensation and entitlements. Following the briefs, MCPOFs met personally with the Chief of Naval Operations to make specific recommendations in five areas: shipboard habitability, drug usage, use of mess management specialist personnel, unionization of the military, and leadership management.

In addition to their talks with CNP and CNO, the master chiefs also had the opportunity to express, personally, their thoughts to the Chairman of the House Armed Services Committee, and other members of Congress. They also met the new Master Chief Petty Officer of the Navy, OSCM Robert J. Walker.

• RESERVE ASSOCIATION NAMES TOP ENLISTED FOR 1975

Radioman 1st Class Donald M. Demarco of Tactical Support Unit 3222, NAS Whidbey Island, Wash., has been selected the outstanding enlisted Naval Reservist for 1975.

The award, presented annually by the Naval Enlisted Reserve Association (NERA), recognizes outstanding contributions to the readiness of the Reserve. Selection is based on overall performance, leadership, service, contributions to enlistment and retention, and participation in civic affairs.

Demarco was advanced meritoriously to chief petty officer and received his award at the NERA national conference in Philadelphia.

• Are You in an Overmanned Ra
• Thinking of Switching Jobs?
Visit Your Career Counselor

And Check the Latest CREO Lis

"If your job in the Navy isn't what you expected it to be, or the advancement opportunities in your field look dim, perhaps you should consider changing your rate."

That advice comes from one advisor, Chief Navy Counselor John V. Regan, Yokosuka's Navy recruiter, who also urges people considering such a change to first visit a career counselor, recruiter or someone in the local command's training office.

Chief Regan points out that not everyone is eligible to switch jobs, since some Navy skills are in short supply. But, if the Bureau of Naval Personnel (BuPers) declares your rating to be overmanned or "closed," your chances are excellent, providing you qualify in other ways. And, the process of changing may be easier than you think.

BuPers Instruction 1133.25B of 30 Jul 1975 details the Navy's entire Career Reenlistment Objectives (CREO) program. Goals of this program, as stated in the instruction, are as follows:

- Increase manning in undermanned ratings;
- Control overages in overmanned ratings; and
- Provide for more viable and attractive career patterns for all members of the naval service.

To manage the Navy's enlisted force properly, BuPers keeps tabs on the manning of each rating in terms of paygrade and length of service (LOS).

Historically, certain ratings/rates have been overmanned to the point of advancement stagnation, while others have suffered from undermanning. It thus is necessary to provide positive managerial control over existing programs to balance personnel assets against needs. CREO is designed to provide that control.

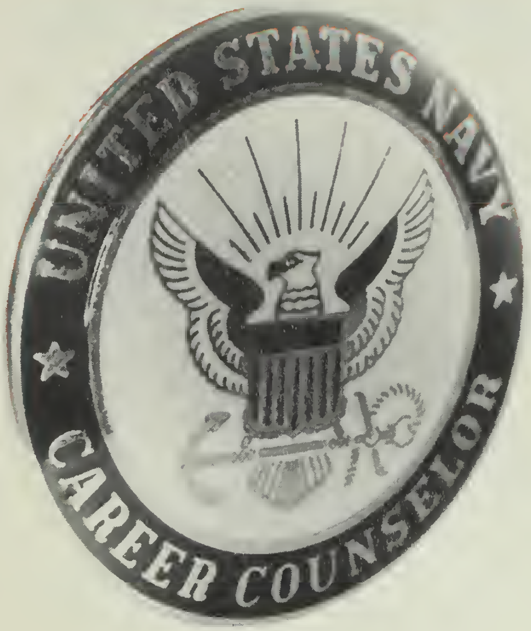
Under CREO, existing retention and conversion programs are governed by manning needs, as reflected in the open/closed ratings list which is revised periodically to reflect manpower needs of the Navy.

According to the 30 July instruction, five groups are established within the CREO system. Groups A through E reflect specified conditions of career manning, ranging from extremely undermanned to excessively overmanned. The following is a description of each group:

- Group A—Rating career manning is less than 75 per cent; extreme shortage of career strength relative to career requirements.
- Group B—Rating career manning is between 75 and 89 per cent; shortage of career strength relative to career requirements.
- Group C—Rating career manning is approximately correct (90-105 per cent); management is designed to stabilize at present levels.
- Group D—Rating career manning is in excess of 105 per cent. First-term reenlistments need not be directly controlled, but to reduce overmanning, other actions may be employed, e.g., conversion programs, noncontinuation, etc.
- Group E—Rating career manning is in excess of 105 per cent; ratings are under direct control of the Chief of Naval Personnel (CHNAVPERS). His approval

ing?

# of Open Ratings



is required for all first-term reenlistments or extensions of two years or greater to initial enlistment, including extensions on active duty for Naval Reservists. Second-term reenlistments may require CHNAVPERS approval as may continuation on active duty beyond 21 years on a case basis.

The July open/closed ratings list shows 18 ratings to be overmanned. Of these, approval of CHNAVPERS is needed before you may reenlist a first time in the following ratings: AK, CE, DM, DT, EA, JO, PC and PH. Additionally, if you are a PH, you must get CHNAVPERS approval before reenlisting a second time. Chief Regan says while personnel in these categories are encouraged to change ratings, those in group A or B ratings generally find it extremely difficult to convert.

One consideration involved with rating conversion is what an applicant may be expected to offer the Navy in exchange for conversion.

Chief Regan explains, "Since money is short now, the Navy obviously cannot afford to send people to 'A' school if they are getting out of the service soon." He adds that while some ratings are so overmanned that conversions are permitted without reenlistment, others frequently require extension or reenlistment if conversion is approved.

Yokosuka's recruiter continues, "If you have special skills in another career field that would benefit the Navy, you may request a conversion that does not include additional training. You may take the advancement test for a different rating (with BuPers approval) to demonstrate aptitude, or you may provide well-documented references of previous work in the field. Include this information with a request to BuPers."

The application for conversion doesn't involve a lot of red tape. One simply submits a special request chit to the commanding officer. After approval, it is sent to BuPers for review by the appropriate staff members. Their decision is forwarded to the command career counselor who then notifies the applicant.

Another way to get a new job and remain in the Navy is through the Selective Conversion and Reenlistment (SCORE) program. Under SCORE, you can get a guaranteed "A" and "C" school in a new rating, plus guaranteed advancement in some cases, by obligating six years of service. Applications for SCORE must also be approved by the commanding officer before forwarding to BuPers.

Chief Regan emphasizes that applicants for conversion shouldn't expect miracles. "The simple fact that an applicant is in a crowded rating does not qualify him for any and all ratings," he said. One must meet criteria set by BuPers for the rating desired or receive a special waiver. This means that scores on the basic battery test must be high enough and one must be physically qualified.

Chief Regan adds, however, that "if you're qualified, conversion is not impossible and not that complicated. People interested should just come and talk to us. We can take a lot of the mystery out of it."

Mess Management Specialist School

In the movies, pupils surreptitiously eat test answers scribbled on bits of paper; in Navy schools, students openly eat the tests! At least that's the way it is in cooking and baking laboratories at Mess Management Specialist School in San Diego. In those laboratories, Navy men and women aspiring to be bakers and cooks learn food preparation skills and techniques which eventually benefit everyone who eats in Navy dining facilities.

Not only do those novice mess management specialists (MS) learn how to cook palatable meals, but also they learn sanitation procedures, recipe conversion

(e.g., how to adjust recipes designed to feed 100 so that 457 can be fed meal-size portions), cooking and baking theory, and wardroom and galley messing. In MS "A" school, students are taught all they need to know to be useful additions to the fleet upon graduation from the eight-week course.

Students are tested each week to measure their progress and detect weak areas requiring additional study or instruction. In addition to written tests, they also participate in a number of practical exercises where full meals are actually prepared. In the labs they cook various dishes and bake breads and deserts which they are not only permitted but encouraged to eat. After all, what better way to tell if the lessons were learned?

The labs are equipped with all the latest equipment so students are not required to work in either enlisted dining facilities or officer messes while in school. Instead they stand normal military duties.

The drop rate is less than one per cent according to Senior Chief Mess Management Specialist William Sunkett, "A" school supervisor. He attributes the low fail rate to the eagerness of students to learn and the willingness of instructors, who are all Navy E-5 through E-9 POs, to spend extra time giving additional individual help when necessary. If a student fails, not being able to do the work at the required pace but sincerely desiring to be an MS, he is transferred to the fleet with the recommendation that he be given on-the-job training. Some later return to attend one of the other MS schools.

Second and third class petty officers have the opportunity to attend The Food Production School class "C" if they are recommended, have clean service records and will have two years' obligated service upon graduation. In that school they are taught advanced baking and cooking techniques as well as the mastery of fundamentals. Additionally, they learn how to be efficient watch captains and operate effectively in their middle management roles.

Senior petty officers attend the Management Principles class "C" School. This School teaches the fine points of operating ship and station dining facilities. Here they learn record-keeping, stock control, dining facility operation—both enlisted and officer—and general administrative duties.

The three MS schools, utilizing the latest in equipment and techniques, are first-rate in every respect. So thorough is the instruction that many universities and trade schools give advanced credit to MS school graduates pursuing degrees and certificates in food management programs.

For many, no further instruction is required to get suitable employment upon separation from the service. According to Lieutenant R. E. Johnston, director of food services schools, "For a person honestly interested in the culinary arts, whether leaving the Navy after four or 20 years, he'll have a very profitable trade as a chef, headwaiter or maitre d'."

Left: Nice part of the job of cooking is sampling results. Right top: Mess Management Specialist strikers check results of their labor. Right bottom: Instructors illustrate how food appeal is increased by method of serving.

Owing to the creation of the new Mess Management Specialist (MS) rating on 1 Jan 1975, there have been several changes in the curriculum. The main difference, according to LT Johnston, is "cooks and stewards previously went through the first five weeks (of "A") school together, then branched off into their respective specialties for another three weeks. Now each student gets a good look at all aspects of food service from meal preparation to service, to management, during the same course time."

The MS rating caused some changes in the Fleet also, according to Senior Chief Sunkett, "Previously the SD rating was overmanned and the CS rating was undermanned. The merger caused manning to settle out between the two problems."

Another change in the Fleet, which students in the MS schools are prepared for, is the supervision of the newly formed rotational pools aboard ship. Senior MS's now teach former CS's and SD's both sides of the new rating. MS's rotate duties between the officer and enlisted dining facilities. "Neither is preferential duty," said MSCS Sunkett.

The director feels that there have been some problems in adjusting to the new rating by a few of the former DS's and SD's, but for the most part the transition is going smoothly and "time will resolve any other differences."

Senior Chief Sunkett saw no major difficulties and

Far left: After class instruction comes the inevitable cleanup. Left: Proof of success is in the tasting. Below right: Student is graded on ability in serving. Right: A young student carefully rolls dough.

felt the merger was totally advantageous to all involved. "The men just accept that they are no longer CS's or SD's but MS's and that's the way it is," he said, a former SDCS himself.

If there were any difficulties caused by the merger, the MS students don't have time to worry about them. Their days are filled with role-playing, wherein they serve meals to each other or occasionally serve guests of the command. Such was the case recently when a French admiral and his staff visited the base and MS's took turns serving coffee. For their efforts in that exercise, they received a grade of "magnifique."

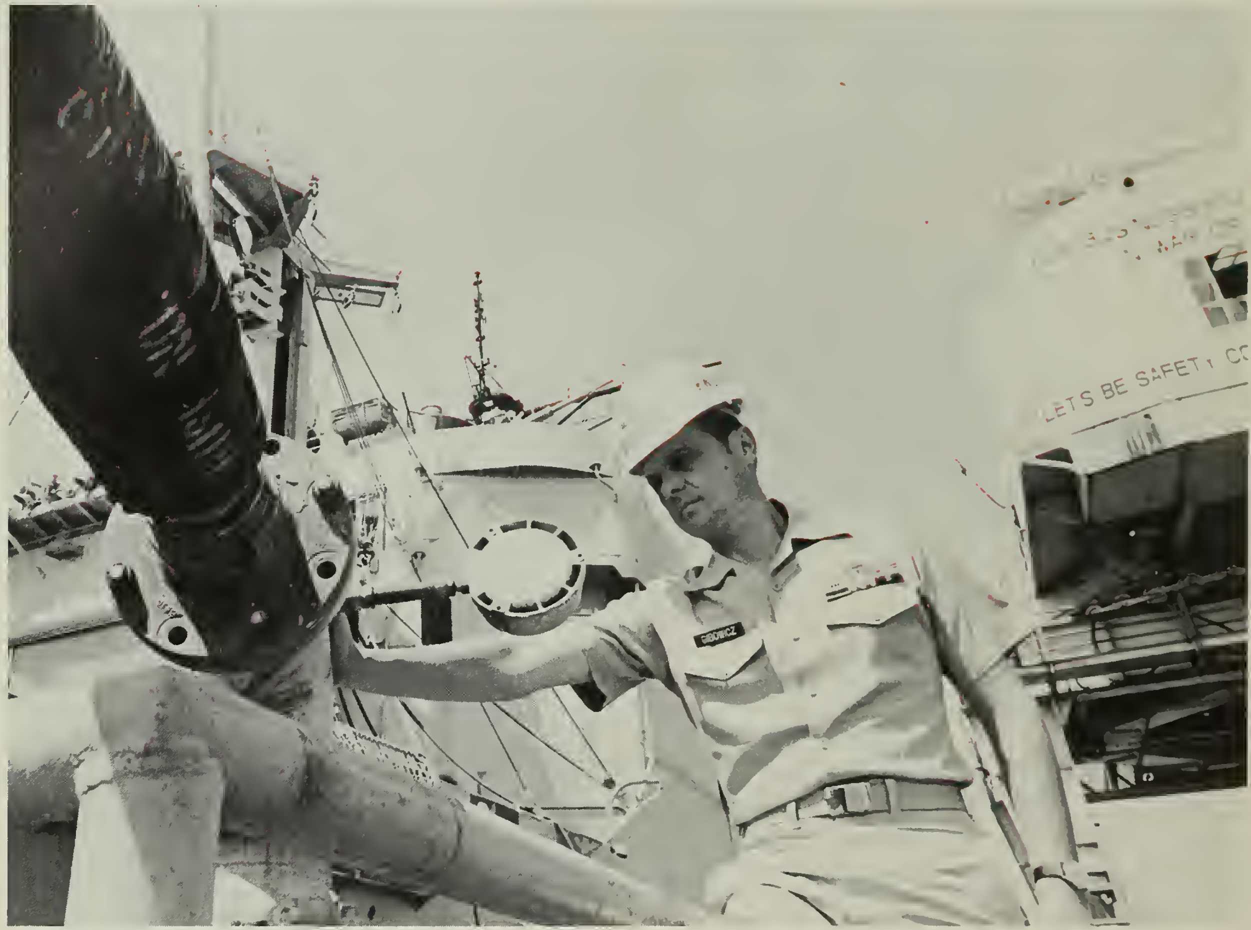
Upon graduation, most of the students receive orders to the Fleet where they put their newly developed skills to practical use. The rest of the students are sent to shore bases, many of which are in isolated areas overseas where food preparation and service quality are very important. Last spring, some students from the Mess Management Specialist school were sent to Camp Pendleton to support the food services operations for Vetnamese refugees.

While the job of MS is often a thankless one, it is being done by professionally dedicated men and women who are well trained and greatly appreciated by the Navy.

—story by JO2 Dan Wheeler and PH1 Michael Jacobs
—photos by PH1 Michael Jacobs

OVERSEAS ASSIGNMENT

CIVIL ENGINEER CORPS



"The quality of a man's life is in direct proportion to his commitment to excellence, no matter what his chosen field of endeavor." These words of Vince Lombardi, the famous Green Bay Packer/Washington Redskins football tactician and leader of men, have become the credo also of Commander Charles Gibowicz.

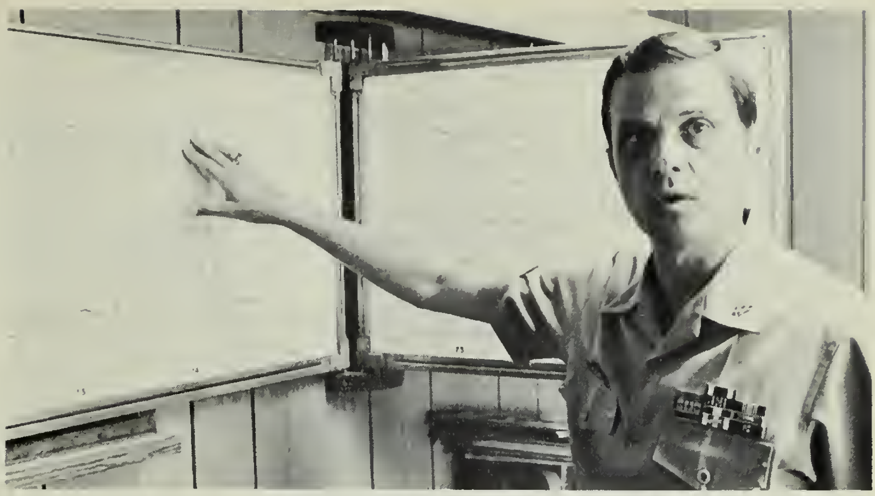
"That's the motto I really believe in," said the Polish-American Gibowicz, who has taken the words of Italian-American Lombardi to heart. "I sincerely believe a person in our country can achieve whatever he wants, within reason, if he works hard enough at it."

Gibowicz has worked hard to get where he is, and he must work hard to stay there. His last duty was as executive officer of the Public Works Center at the sprawling Subic Bay naval complex, 80 miles northwest of Manila. He described his job as comparable to the "assistant chief executive of a large business, or an assistant city engineer for a city of 35,000," the population of the Subic Bay complex.

The Navy's largest public works center in the world, Subic Bay employs 13 naval officers, 60 U. S. civilian employees and 3500 Filipinos. "We tended the base engineering needs such as construction, maintenance, utilities and transportation, and we supplied water, power and steam to ships in port here," explained the commander. "We maintained a fleet of 4000 vehicles, from sedans to cranes. PWC also administered the needs of 1600 families who live in base housing." In addition, the center operated a sawmill, dredge, and asphalt and concrete plants.

Refusing to relate one particular aspect of his job as the most challenging, Gibowicz stated, "The whole job was a challenge, involving people, money, material and equipment on a big scale. This is a $25 million operation."

A 1957 graduate of the University of Massachusetts, Gibowicz joined the Navy that same year. After serving his obligated three years as a line officer, he wanted to put his engineering degree to use. "So I transferred



Left: CDR Gibowicz inspects a fuel hose connection. Right: Explaining a facet of his job. Below: The Gibowicz family on the putting green at the Subic Bay U.S. Naval Base miniature golf course. Below right: CDR Gibowicz inspects a construction site.

to the Navy's Civil Engineer Corps," he revealed. "The CEC is a dedicated outfit . . . a great outfit to work for."

In his spare time, Gibowicz enjoys golfing, sailing and following the Boston Red Sox. "I used to watch the Red Sox at Fenway Park as a kid," he said. He then reminisced about his childhood in the Polish community of Greenfield, Mass.

The first Gibowiczes to immigrate to the United States were Charles' paternal grandparents. "My father, who was born in the States, was a farmer," said Gibowicz. "I was like any other kid growing up on a farm . . . I enjoyed driving the farm machinery. My mother is from Poland. She arrived in Wareham, Mass., in 1935, from Bialystock, about 200 miles northeast of Warsaw," he added.

It wasn't until he began grammar school in Greenfield that Gibowicz learned to speak English. "Polish was our household language, but I learned to speak English quickly." He also has a knowledge of Spanish and Russian. "I took Spanish lessons in high school and college. While stationed in Kodiak, Alaska, I took Russian lessons from a Russian Orthodox priest. I attended public school," he continued, "but in addition, I took catechism and Polish history lessons from Polish Catholic nuns."

Gibowicz still corresponds with his mother in Polish. The language, however, isn't the only Polish custom he still practices. "I still enjoy Polish foods and during Easter we have a priest come into the house and bless the food."

This past summer he, his wife and two daughters packed up for transfer to Washington, D. C., where the commander is serving at the headquarters of the Naval Facilities Engineering Command.

—Story by JO1 Paul Long
—Photographs by PH1 John R. Sheppard

PROFILES OF THE FLEET

DMC Norman Butman

Showing It Like It Is

Mechanical pencils? Electric erasers? Rapidograph pens? With these tools-of-the-trade, it would seem the Navy's illustrator-draftsmen lead the professional life of Riley. Not necessarily so, according to Chief Illustrator-Draftsman Norman C. Butman, now assigned to the Human Goals organization of the Bureau of Naval Personnel.

"These tools aren't as frivolous as they sound, and they all have a purpose," he said. "They're designed to enable us to put out a professional product without wasting time and effort."

Below: DMC Norman Butman, assigned to Human Goals organization of BuPers, is one of fewer than 30 chief illustrator-draftsmen on active duty.

Since reporting to BuPers in late 1970, Chief Butman has originated a wide variety of professional art and drafting work, much of which is used Navywide. Among these are career retention pamphlets, booklets and posters; the Navy's antismoking pamphlets; educational opportunities brochures (NESEP, BOOST, etc.); the Division Officer's Planning Guide; and Sailor-of-the-Year and the U. S. Navy reenlistment certificates. During this assignment he also helped produce the Navy-oriented "Half Hitch" cartoons, seen in many Career Counseling offices throughout the fleet.

A year's tour of duty on the staff of ALL HANDS Magazine in 1971 was a favorite, he said. "I tried to learn as much as I could about the magazine's operation while I was there. It was an opportunity for me to work in different areas of my rating than I had before, and it was a great experience."

He designed several of the magazine's covers, and prepared story layouts and cartoon pages as well as numerous drawings, illustrations, charts and tables for publication.

Currently, Chief Butman provides illustrative-drafting support for the Human Goals organization of BuPers. His many tasks include the design and production of visual aids and associated material in support of the program.

Chief Butman joined the limited ranks of illustrator-draftsmen (there are only about 30 E-7s on active duty) by being in the right place at the right time.

"After recruit training in 1958, I was sent to Commander, Cruiser Force Atlantic to await orders," he explained. "While I was waiting to see the personnel officer, I watched a staff artist who was doing some drafting and artwork. He started talking to me (probably to stop my staring over his shoulder), and asked if I was interested in that sort of work. I jumped at the chance to make myself heard. That was exactly the field I'd hoped to get into."

While stationed in Dam Neck, Va., in 1969, Butman was recommended for the warrant officer program but, he explained, "There were very few warrant officer categories at that time, and I wanted to stay in the illustrator-draftsman field. Had I accepted the nomination, I would have had to select a different line of work."

Speaking of his present assignment, Chief Butman said, "It's exciting to be part of the Human Goals organization. There's no doubt that the programs are good for the Navy. If someone is having a problem in one area or another, it's bound to affect his or her capability as a contributing member of the Navy."

He continued, "Several years ago, when there wasn't much emphasis on human resource management programs, a lot of individual talent and experience was lost to the Navy for one reason or another. Now," he said, "we have the facilities, the personnel and the expertise to concern ourselves with improving not only individual performance but also command effectiveness. I, for one, thoroughly enjoy being part of a group that exists to improve leadership and management throughout the Navy."

—JO2 Jan Wood

Navy Counselor Chambers

Telling It Like It Is

Above: **Navy Counselor 1st Class Marion A. Chambers advises a young sailor.**

As a full-time career counselor with five years' experience, Navy Career Counselor 1st Class Marion A. Chambers, at the Fleet Antisubmarine Warfare Training Center, Pacific, San Diego, has to cope, in many instances, with two opposing forces—the needs of the Navy and the desires of the individual.

By virtue of his training he is the primary source of accurate, up-to-date information about career policies and programs. He distributes hundreds of pamphlets each month outlining service benefits. He discusses individual career planning with every person aboard, students and staff alike.

As a Navyman for nearly 17 years, NC1 Chambers has spent, by his own admission, many years studying people. Through this study he has acquired the quality most essential to career counselors—the ability to deal with people honestly and effectively.

Whenever Chambers gives career advice he constantly refers to the career counseling manual. He feels it is important for a person to be able to see in writing the requirements of programs the Navy has to offer.

"Career counselors can definitely affect morale," stated Chambers. "If a person is given incorrect information not only does it damage my credibility but also it could hurt his entire career."

More and more people here are visiting their career counselors. Whether they plan to stay in or get out, they know they will get straight answers from Petty Officer Chambers. He cares about the Navy, its policies and its people.

Story and photos by JO2 Kathryn M. Hoogeboom

PROFILES OF THE FLEET

LCDR Mike Austin
Jack of All Trades

Lieutenant Commander Mike Austin is executive officer of the tank landing ship USS *Peoria* (LST 1183), operating with the U. S. Seventh Fleet in the Western Pacific. He's also a teacher. Let's take a look at him in this latter capacity.

It's 1530 and dungaree-clad sailors sit around white-topped tables in *Peoria's* wardroom. Some of them flip through pages of textbooks, some sip coffee from paper cups.

LCDR Austin is announcing that class is about to begin. He glances at his watch, assured that the latecomers will show shortly. The class soon starts and "Professor" Austin fires questions to the students concerning constitutional amendments. A couple of sailors take the lead in answering the questions, and Austin seems to recognize them as leaders. He works harder on those who are not communicating as well.

The latecomers arrive. Cracking an easygoing line at which everyone laughs, he continues the lecture, occasionally gesturing with his hands.

A certified teacher from San Diego Community College, Austin teaches American history, two American government classes and an English course aboard the San Diego-based *Peoria*. "Teaching is a wonderful experience. The more interaction I have with the men on varying levels, the better I know them and get feedback on how I'm doing as executive officer. It gives me a chance to hear them out, to get a feeling of what most of their frustrations are on the ship," he says.

Now it's 0830. LCDR Austin is seated in a rattan chair in the executive officer's stateroom. His desk is cluttered and behind him is an electric typewriter.

"It's like being the mayor of a small city," says Austin, concerning his duties as executive officer. "You have to tend to general utilities problems and general administration. You have to run an efficient organization and at the same time be concerned with the well-being of its people." The 36-year-old naval officer cites some utilities problems: "Plugged drains, clean spaces, proper food and food sanitation." A collateral responsibility calls for handling a variety of personal counseling functions.

The executive officer is involved with the ship's day-to-day problems because the commanding officer must be "isolated from them so he can have time to make policy decisions" and interpret the policies of his superiors.

"The CO is in charge of morale; he sets the tone," says Austin. "I implement and carry out his policies."

The hardest part of the job, remarks Austin, "is getting results and having the men know they are involved. The idea is to guide them in the right direc-

tion—it's a big psychological challenge. And you know that the same technique may not work in every case. A particular approach to a leadership problem might be a tremendous success today and a total flop the next time you try it."

Austin entered the Navy in 1961. He attended Whitworth College in Spokane, Wash., graduating that year with a bachelor of arts degree in political science. "I wanted a broader background in interaction with other people. The Navy seemed like a way to get it. I wanted to travel, too. I was raised on a dairy farm and I never had seen the ocean. My first ride in a ship was aboard the Bremerton ferry when I was 20 years old," recalls the 1956 graduate of Highland High School in Cowiche, Wash.

Austin was going to get out of the Navy at one time but, along with his wife, Bonnie, decided against it. "I had found that the Navy provided an opportunity to get involved with a wide variety of problems and assume responsibility at a young age that I couldn't find on the outside," he added. Opportunity is important to him.

"I came from a poor family and have always been impressed that you don't have to stay that way in life. You can rise, however high you want, through hard work. That's still the greatest thing about our country."

Despite his long day, LCDR Austin finds time for his hobby as an artist—print making from linoleum blocks. "It's a good technique because it doesn't require a great deal of gear," Austin says.

Much of his work deals with nature, particularly birds. "I also do a lot of Chinese stuff, probably because I've been over in this part of the world so many times," he observes.

Altogether, it's a busy life being a ship's exec, the visitor decides as he makes his exit, assured that the X.O. door remains open to anyone.

—Story by JO1 Paul Young
—Photos by PH1 John R. Sheppard

LCDR Daniel L. Rainey, Jr.
Surface Warfare

Lieutenant Commander Daniel L. Rainey, Jr., assistant ship's navigator of USS *Enterprise*, qualified for the designator of surface warfare officer—believed to be the first naval aviator so certified.

"This qualification is a mark of major professional achievement," wrote the Chief of Naval Personnel in a letter of notification. "It identifies you as an officer who demonstrated significant proficiency in the art of surface warfare."

The letter also stated that LCDR Rainey had achieved certification under significantly more rigorous criteria than had previously been required, further increasing his value to the Navy.

"This qualification is a mark of major professional achievement and identifies you as an officer who demonstrated significant proficiency in the art of surface warfare. This qualification, added to your demonstrated professionalism in naval aviation, substantially increases your value to the naval service."

The designator requires qualification in several areas, among them officer of the deck, quals in the Combat Direction Center, damage control and 3-M systems.

PROFILES OF THE FLEET

CWO McClymonds In the Works

Chief Warrant Officer Samuel McClymonds is the machinery training instructor and observer at Fleet Training Group headquarters in San Diego. As such, he imposes various engineering "casualties," then observes and evaluates ships' engineering personnel taking corrective action.

After the drill, he recommends ways to improve recovery techniques. According to CWO McClymonds, "The most enjoyable thing about my job is that it deals with two major interests—engineering plants and people."

Before reporting to Fleet Training Group, he completed the ADCOP program and was assigned as main propulsion assistant aboard USS *Mt. Vernon* (LSD 39). "ADCOP enabled me to improve my technical knowledge through formal classroom studies and to relate better to the age group of personnel coming into the Navy," he said. "This enabled me to improve my performance proficiency."

CWO McClymonds has been a member of the Fleet Training Group staff since September 1974. His billet at the training group has exposed him to various engineering plants and methods of management.

What is the most gratifying factor about being stationed at Fleet Training Group? According to CWO McClymonds, "I've gained a great personal satisfaction in seeing the improvement in engineering readiness of various ships as they complete training."

—Photo by PH3 Pete Compato

CWO McClymonds takes note of a crew's engineering proficiency.

SM1 Dick Cannon A Recruiter Returned

Perhaps nearly all Navy men and women at one time or another ask themselves, "Whatever became of the recruiter who convinced me that I should join the Navy?"

Signalman 1st Class Richard D. Cannon is a good example of a former recruiter returned to the fleet. He is serving aboard the guided missile light cruiser USS *Little Rock* (CG 4), flagship for Commander, U. S. Sixth Fleet, homeported in Gaeta, Italy.

As a recruiter, Cannon convinced more than 300 young men and 50 young women that the Navy was the life for them during his four-year tour in Fitchburg, Mass.

"I just took the time to explain what the Navy had to offer each individual without any golden, empty promises of a soft life. I guess being honest paid off, because I have met quite a few since then and they all seem to have adjusted," he said.

Cannon was a recruiter canvasser in Fitchburg. His primary job was to visit area schools and tell the Navy story to both male and female students.

"I gave them all the facts and they surprised me with their responses," he added.

During the last two years of his recruiting tour in Fitchburg, Cannon was the petty officer in charge of the station. During his off-duty hours, he assisted in organizing the Fitchburg Little League and managed one of the teams.

He and his wife, Elaine, were married during his first Navy tour. In the next decade, the Cannons added daughters Deborah, Doreen and Dianne. The family resides in Gaeta, a small fishing and resort town nearly halfway between Rome and Naples on the Tyrhennian Sea coast.

"Gaeta is a beautiful place in which to live," Mrs. Cannon said. "It has a relatively mild climate and we are fortunate to see the sun during most days of the year."

Cannon spent the first 12 years of his career aboard destroyers on the east coast. He was one of the first Navymen to go through the Petty Officer Leadership Training School.

He spent 10 months during 1961-62 in the Antarctic with Operation Deep Freeze aboard the attack cargo ship USS *Arneb* (AKA 56). He has since sailed on each of the seven seas.

"I guess that makes me salty," he said, "but I look back at my recruiting tour as having been the most challenging and yet rewarding of all. Elaine and I really enjoyed Fitchburg. We had a marvelous group of friends and neighbors whom we'll never forget."

Before reporting to *Little Rock*, he served in USS *Richard Page* (FFG 5) as a career counselor.

When the flagship is in home port, Cannon umpires for the ship's intramural softball league and he also manages a girls' softball team. His daughters, Deborah and Doreen, are on the team. "When I umpire, I call them the way I see them and there is rarely an argument."

While Signalman Cannon is busy in the ship and on the softball diamond, Mrs. Cannon is also active in the American community. She is president of the Navy Wives Club, Branch 195 Chapter, for Latina Province. Also a Red Cross volunteer, she assists the resident Navy physician at the Navy dispensary in nearby Formia. Elaine serves on the Village Council and is an active member of the Parents-Teachers Association at the Joshua Barney Elementary School in Gaeta. In her spare time, she assists in a special education program for slow learners.

Always cheerful, Dick Cannon is known as a "good shipmate" who always has a kind word for everyone.

When asked how she manages to be so active in civic affairs with three daughters at home, she replied, "All it takes is patience and a very understanding family."

"The Navy is the greatest thing that ever happened to me," Cannon said. "I've gained an education, traveled, and learned to be a leader. Most of all, I feel as though I have positively contributed to the overall effort.

"Elaine and I agree that overseas assignment is a wonderful opportunity for everyone. It's been a grand experience."

"If anything, the long separations brought us closer together," Elaine commented.

Cannon added, "It hasn't been a rose garden by any means, but I am satisfied with my life in the Navy. It's been demanding, but also personally rewarding."

—Story & photos by PH2 Harry Deffenbaugh, USN

Recruit Training - Way Back When

Apprentice Boys

Of The 19th Century

Recruit training is something which is constantly changing in order to keep up with the times and the demands of the sea service. New ships and new weapons demand new ways to perform duties and the changing of civilians into sailors in only a few short months is a monumental task. Through the years the Navy has been equal to that challenge.

What was boot camp like when you entered the service? Probably different from that of 20 years before and drastically unlike anything of nearly a century ago. At that time, nearly all training of landsmen took place aboard ship.

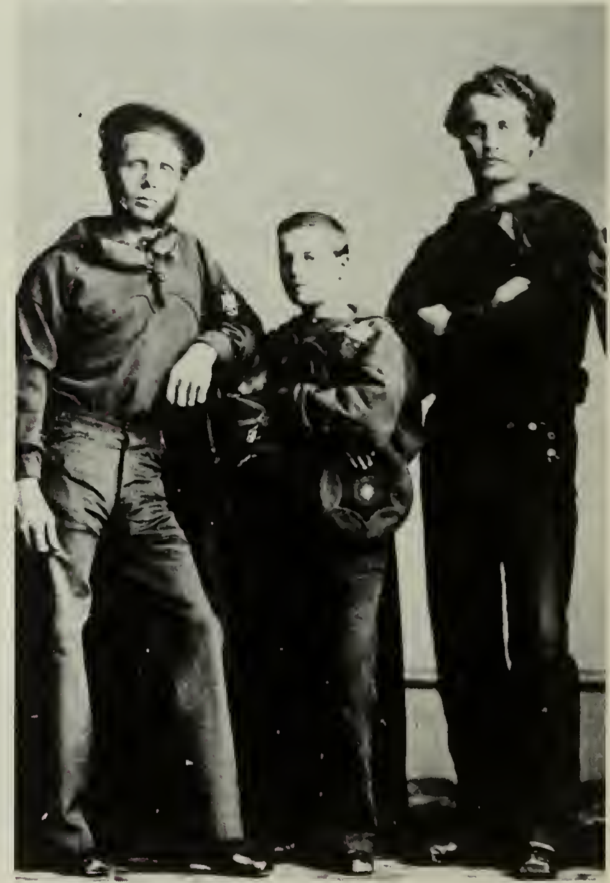
In the late 1800s, all enlisted training took place aboard the fleet's training ships and the apprentice system of Commodore Stephen B. Luce turned landlubbers into sailors. Today, the enlisted path begins at the entrance gates of the training centers at Great Lakes, Ill., San Diego, Calif., or Orlando, Fla. But before the turn of the 20th Century, it was common practice to take a farm boy or a city kid and give him his first taste of the Navy aboard the training ships. After all, if the sea was the goal, what better place to begin than aboard ship from the very first day of one's service?

Little survives in print nowadays detailing the activity aboard those ships and gone, too, are most of the enlisteds who began their careers as apprentice boys. From what has survived, notably a "boy's book" entitled "Boy Life in the United States Navy," we can gain a glimpse here and there of what it was like to serve in the United States Navy as an apprentice boy or, to use the term of that era, simply as a "boy."

Published in 1885 it was written by an "H. H. Clark, USN," identified as a Navy chaplain (chaplains also conducted classes aboard ship as teachers). The author dedicates his book to Commodore Stephen B. Luce, USN, "Whose earnest and unremitting devotion to the United States Naval Training Service has contributed so much toward its present efficiency and its future promise."

As "Boy Life in the United States Navy" recalls an element of Navy life now long forgotten, so does it reach back to a general way of life in America, now but a distant shadow—when man's wants were far more simple, his needs basic and his aspirations austere. For boys of those days two driving factors dominated their lives—the desire to get away from their roots and see the world, and the urge, too, to emulate the "captains of industry" who showed by their living standards and way of life what success was all about. Whether on shore or aboard ship, the two main ingredients of success were hard work and thrift. These two factors were constantly drilled into the thinking of the young.

To join the Navy back in 1885, it was necessary to



Left: New recruits are brought aboard ship. Below: A young apprentice boy with shipmates. Facing page, top: Early photo of Stephen B. Luce, who later developed the apprentice system of training sailors. Bottom: Rare early photo captures tense expression of an apprentice boy, apparently during gunnery operations in the Spanish-American War.

go where the ships were, armed with a letter from one's parents or guardian, and simply ask to be allowed to join up. In H. H. Clark's book the training ship is in Boston harbor and the recruit is a 15-year-old from a Down Maine farm. As the group of boys arrive on board the training ship *Minnesota* from a steam cutter which has ferried them from the city's "India Wharf," they're met on deck by the ship's executive officer. Ordered to "toe a seam" on the ship's main deck, the group of boys—14 to 17 years old—is then inspected and questioned.

As more experienced and senior recruits are being put through their paces in the ship's rigging, the executive officer questions each new arrival, accepting some and rejecting others on the spot. The use of tobacco and beer automatically brings rejection, for this is the time of the great temperance movement. Emotional immaturity and lack of valid documents indicating parental approval of the enlistment do some others in. Over the side as well go the individuals who were obviously sent on board as a form of punishment by exasperated parents. The successful applicants are those who "give truthful answers to searching questions, look their questioner in the eye and can list a classic or two they've read in the recent past."

Then, it's down to the ship's office where the candidates fill out forms, sign applications and agree to "serve the Government till they're twenty-one . . ." From there, it's on to the ship's surgeon and the usual enlistment physical at "a place screened off on the gun deck.

Having been passed by the surgeon, the candidate ". . . was sent to the schoolroom on the berth deck—a steerage fitted up as a library—where a board of officers were assembled to inquire into the mental and moral qualifications and aptitude for the service of those applying . . ."

The candidate "was directed to read aloud; to write a sentence; to perform examples in arithmetic; and to reply to a series of questions such as any bright, intelligent boy could readily answer. Inquiries were made as to his moral training and habits, how and where he spent his evenings, his religious preferences, and various other things . . . Some explanation was made of the general character of life on board ship, the discipline, the restraints, and the length of service, and the question was put to him whether he was willing to accept these conditions . . .

"And now came the final test—an ordeal which it is impossible for many boys to pass. He was taken on deck to see whether he could go aloft without being dizzy . . ."

In the book, naturally, the candidate passes the rigging test—zipping up one side and appearing in a matter of seconds in the hammock netting on the other side.

"After a brief talk with the captain (the candidate) signed the shipping articles, and his name was enrolled upon the ship's books as a third-class apprentice boy in the United States Navy."

As for pay, the new apprentice learned that he would be paid at the rate of $10 a month over and above his board, that no allotment could be made to help support another (as his parents), since ". . . the law forbids that a cent of your earnings shall go to support any relative. A part of it (pay) is needed for outfit and spending money, and the rest is kept on the books for you till your discharge at the age of twenty-one."

The author also states that a third-class boy was paid $9.50 a month, so it could be assumed that 50 cents a month was withheld until the end of an enlistment.

The master-at-arms is described in the book as "being the chief petty officer of the ship" who issues each recruit his hammock and teaches him how to lash and stow it, along with how to get in one.

The recruit then goes to the paymaster who issues ". . . a motley collection, including besides clothing, a bar of soap, a jackknife, a scrubbing brush, a shoe brush, a comb, a box of blacking, buttons, silk, needles, etc. Most of these things, after being marked with (a) number, were neatly stored in a large black bag, the check for which was given to the young recruit, with

Above: Exercises in swordsmanship, using sticks for safety, were later to become a part of the daily routine for apprentice boys training with more seasoned sailors. Below: Men and youths of all ages vie for selection as Navy crewmembers. Acceptance often followed a demonstration of dexterity in performing seagoing skills. Facing page, top: USS Minnesota, in formation. Bottom: The ship became an apprentice boy's home as well as a seagoing vocational school.

the injunction to take good care of it."

After a visit to the barber, the recruit is allowed some moments to himself and like boots since Noah's time ". . . he felt of his head to see if any hair was left, looked at his new uniform, fingered his knife lanyard. He was no longer an outsider."

The recruit is then told his first days' routine: "They won't put you through the regular drills the first few days. Let's see, you must turn out in the morning when all hands are called, lash your hammock and carry it to the nettings. Then you must scrub yourself in a bucket of water. After that the captain of your part of the ship will give you something to do until inspection at seven bells, when we all muster on the spar deck. Then we go to 'formation' at eight, have prayers and march to breakfast. Then comes 'cleaning bright work,' and 'quarters at three bells.' After that there will be nothing special till hammocks are piped down at sunset . . ."

I would like to know what you haven't got to learn on board this ship? Why you must be a regular soldier and march . . . you must study gunnery and be an artillerist; you must know how to use small arms. They teach you how to fence and box, and row, and swim, and dive in submarine armor, besides regular school studies. You've got to learn to make your own clothes, and mend them, and scrub them, and take care of them, too, so that none are stolen. There's no end to the drilling and teaching here."

The ship's complement included 414 boys, 60 seamen and 40 marines. In all, the ship's company included 622 officers and men. Rounding out the enlisted men were some 50 or 60 petty officers—boatswain's mates, gunner's mates, sailmaker's mates, quartermasters, coxswains, machinists, schoolmasters, yeomen, apothecaries, stewards, etc. The recruit was told that ". . . some of the petty officers wear sack coats, but most of them dress like the crew and wear badges on their sleeves."

The officers, he was told, were generally in three groups—graduates of the Naval Academy, including passed-midshipmen, those staff officers which included the surgeon, paymaster and chaplain (who was the head schoolmaster); and the warrant officers, those few enlisteds who succeeded in rising in rank.

Some insight into life in the Navy is contained in the 1885 account. For instance, one chapter describes the noon dinner formation and police court—held by the executive officer and the forerunner of today's X.O.'s mast. Each boy was assigned to a gun crew for formation.

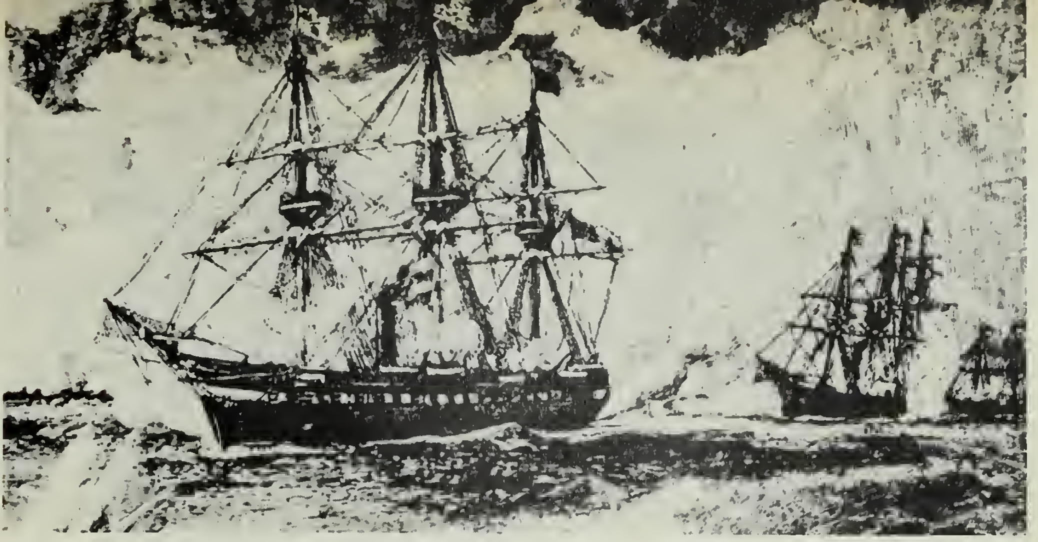
" 'Muster your crews!' sounded sharply along the lines. At this each gun captain stepped from the ranks, called over the list of his crew, and fell back into place.

" 'Captains, front and centre, march!' The captains now moved one pace to the front, faced quickly about, marched briskly to the centre, and stood drawn up before the adjutant.

" 'Report!' he commanded.

"Saluting as they did so, the captains, in turn, reported the presence of their crews, or the absentees, if there happened to be any.

" 'Stations, march!'

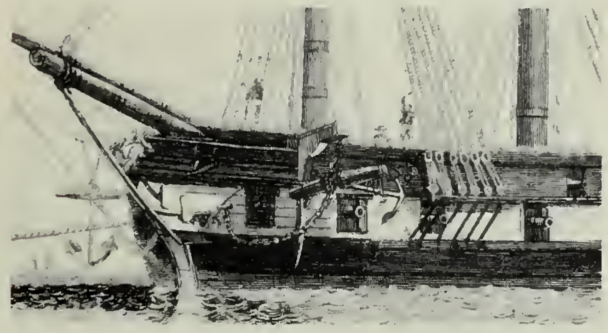


"With the same military precision and decorum, each captain returned to the ranks. A moment all was silent; then, the welcome order, 'March to dinner!' was passed, and the battalion moved off in squads to the deck below . . .

"Presently all the boys were standing at the tables and it was so still that the fall of a feather would almost have been heard.

"The order 'Seats,' from the master-at-arms expelled with force brought the whole four hundred boys to the benches set by the tables as though each boy had been a projectile and had slipped out of a shotrack."

Dinner, naturally, was "salt horse" and the cook, also in keeping with the nautical, was "Commodore Duff." Mention was made of the "starvation army" and "the bread and water squad," or those who had "to toe a seam and dine on hardtack and water."



Minor infractions were dealt with at the police court which convened after dinner. When the executive officer was ready, the master-at-arms brought the offenders before the exec on a variety of charges ranging from laughing during divine services to lying to a petty officer. The sentences ranged from a warning, to bread and water for a week with a full ration every alternate day.

Sailors were just as careless in the 1880s as ever when it came to personal property, and the Lucky Bag was in full swing then with the master-at-arms claiming anything found adrift from towels and socks to brushes. Extra duty didn't seem to "buy" things back in those days. Six hours spent toeing a seam could "redeem" a blanket or a month in "quarantine" (restriction) could "purchase" a pea coat. Auctions were held at regular intervals to clear the Lucky Bag of "unsold" items.

In those days before electricity and the evening movie, training ships had evening sing-a-longs. Sea chanties were the more popular songs and the training ships employed this means to teach the apprentice boys naval history—through such chanties as "Constellation and Insurgente" and "Constitution and Guerriere," along with such nautical songs as the "Rule of the Road at Sea" to teach novice sailors the difference between left and right, port and starboard, and red and green. The idea was that when a sailor found himself in a pinch, all he had to do was recall a certain verse of a ditty and he'd know which way to turn the wheel.

The wildness of young boys—after all, they were all under 17—is pointed out in "Boy Life in the United States Navy," as the oldest and most dangerous stunt (besides skylarking in the rigging) is recorded: spilling another from his hammock by cutting the clews. The results of this below-decks trick were often tragic and the punishment doled out was oftentimes severe; these were the days of single and double irons.

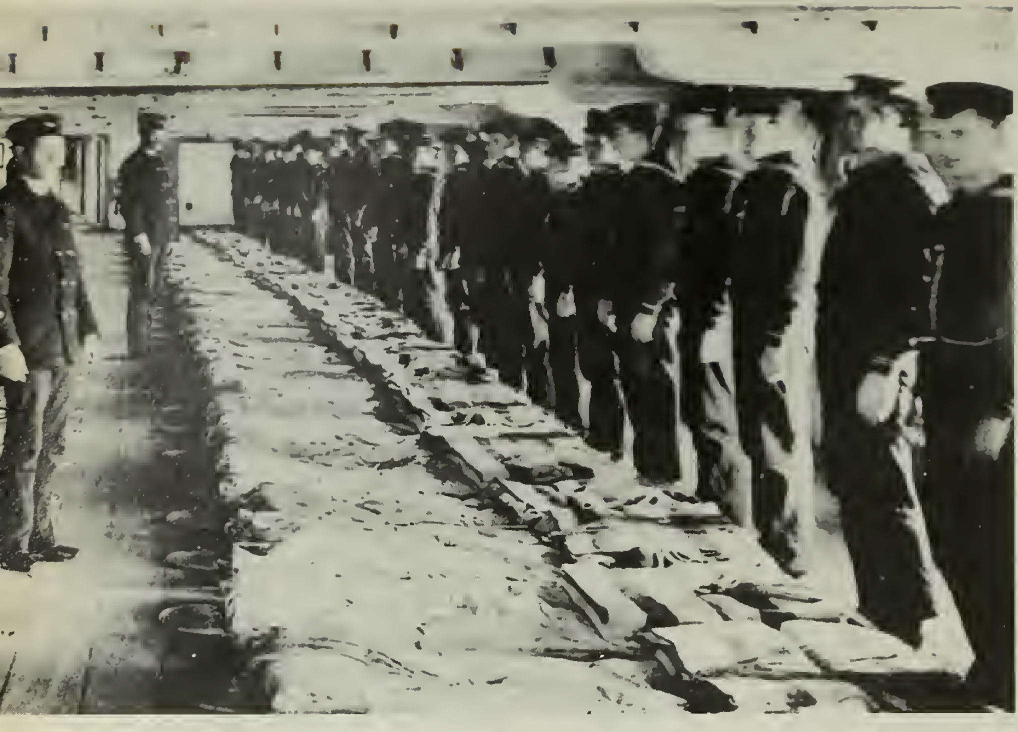
These were the days, too, when the dishonorably discharged were drummed out of the service. A "drumming out" is reported to have gone something like this:

" 'On deck there, on deck!' roared the boatswain's mate at the boys who were hanging back to see the master-at-arms bring the prisoner from below.

"This sent (the boys) scampering up the hatchway, especially as the prisoner just then went up too . . . The port side of the quarterdeck was a solid mass of men and boys, while the starboard side was reserved for the officers who were coming up in 'sword and helmet' as they say.

"Presently a midshipman came up from below and reported to the officer of the deck that the officers were all up and aft. That gentleman informed the executive officer, who reported to the captain that all was in readiness.

"Meanwhile the prisoner at whose expense this assemblage had been called, was brought to the mast by the master-at-arms. Every boy elongated his neck like a crane to get a glimpse of the young culprit who was endeavoring with poor success to return their looks with



Left: Early photo shows inspection of belongings, hammocks and personnel. Below: General muster on deck. Right: Sailors gather around gun for training exercise. Far right: Some of an apprentice boy's training took place high in the rigging.

glances of stolid defiance. He had been caught in the act of stealing twenty dollars from a midshipman's hammock, where it was concealed between the covering and the mattress. He had also been previously guilty of petty thefts. His case had been referred to the Navy Department and an order had come for his dishonorable dismissal from the service.

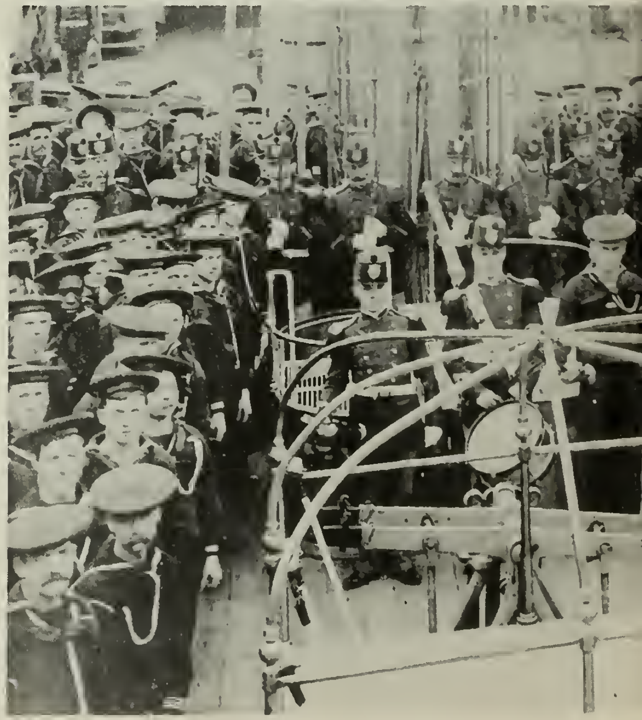
" 'Have Boy Hawkins brought aft, sir' said the captain.

"Hawkins was marched where he was in full view of the whole ship's company and the captain read the Navy Department order for his discharge. He followed this with a short lecture to the assembled crew. 'You will proceed, sir' he then ordered the executive.

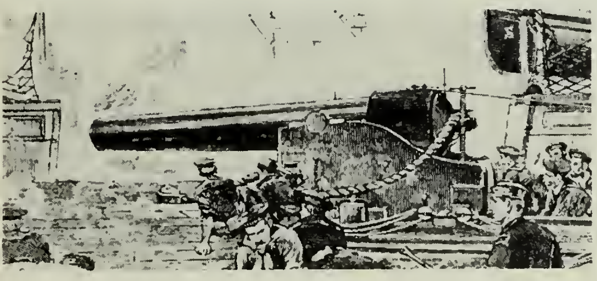
"The utmost silence prevailed while the ship's tailor with his great shears began cutting away the trimmings from Hawkins' uniform. The cap-ribbon containing the name of the ship first disappeared; the shirt collar with the stripes of white braid was clipped off at the seam; the wristbands, also, containing stripes of the same material, came off next and the boy stood void of every honorable and distinguishing mark . . . He was taken farther aft, where the drummer and fifer stood in waiting and, at a signal from the executive, he was marched between the master-at-arms and the sergeant of the guard to the port gangway, followed by the satirical music of the 'Rogue's March,' rendered with great spirit; for sailors are delighted to run a thief out of a ship. A boat lay at the port gangway into which he was hustled, and quickly pulled to the wharf where he was landed and allowed to go his own way."

Saturday was evidently spent in field day since Sunday called for personnel and material inspection, divine services and liberty for "good conduct" boys who had placed their names upon the liberty list earlier in the week.

"The cabin door opened and the captain stepped out upon the deck. The marine guard came to a present arms, the executive saluted and all abaft the mainmast raised their hands to their caps in a prolonged salute. The chief engineer, the paymaster and the surgeon now appeared from below, each reporting his department to the executive who, after the lieutenants and junior lieutenants had done the same by their divisions, transmitted the reports as a whole to the captain.



"General inspection succeeded. A signal was given to the band-master and the band struck up an appropriate selection. The captain accompanied by the executive then started on his tour of inspection. Each boy was scrutinized to see that his clothing was in proper condition and his bearing military. Any shabbiness or untidiness was carefully observed and the luckless boy and the officer in charge of his division were each likely to receive a cutting rebuke. At the same time the whole ship was kept under review from bridge to keelson. Any disorderly arrangement of even a pennant's halyards, or the slightest negligence in the care of any part of the ship, invoked the captain's serious displeasure. His aim was to have a model ship and no detail however trifling was passed over."



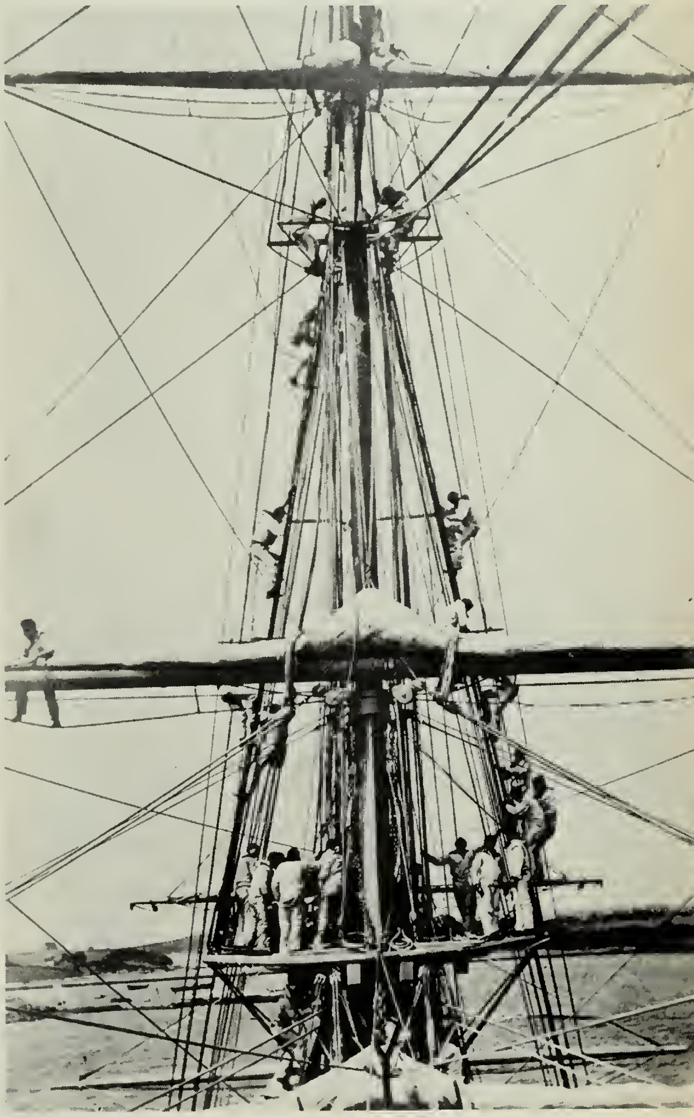
Liberty was granted before divine services and apprentice boys had to return to the wharf at sundown, nor were they allowed to drink while ashore.

Apprentice boys spent anywhere from three months to a year aboard a training ship depending upon the schooling they received, how well they learned, and the needs of the fleet in filling vacant billets. Once aboard a cruiser or man-of-war they were integrated into the regular crew and there was little difference between their lot and the remainder of the crew except that they could not go ashore in a foreign country on liberty unless they were headed up by a senior petty officer who, in turn, was held responsible for their conduct.

The system of training ships and that of apprentice boys has long since departed the naval scene. Perhaps they would be at a loss in today's Navy of electronics and nuclear weaponry, high-speed patrol craft and guided missiles. But for their time and their place in the scheme of things, they filled the bill.

Just as today's Navy men and women are the best trained in the world, so were those young, bright-eyed men of days gone by who took up the slack after the Civil War. The system must have worked. After all, didn't they—in 1898—fight the shortest, most decisive and successful war on record for the United States Navy? A salute then, to Stephen B. Luce and his apprentice boys.

—J. F. Coleman



letters to the editor

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, (NOP-00723) Navy Internal Relations Activity, Office of the Chief of Information, Washington, D. C. 20360.

Shotline Comment

SIR: The picture on the inside back cover of the May ALL HANDS, with the caption, "A young sailor prepares to fire the shotline as his ship nears the pier," is an embarrassment to shiphandlers. Any self-respecting conning officer would be ashamed to admit he could not maneuver his ship close enough to the pier so the boatswain's mate could send the messenger over by heaving line. I would like to believe your picture is staged and is not as the caption says.

Here at the Naval Amphibious School Little Creek, we have a very fine shiphandlers' course where conning officers perfect the skill of bringing their ship alongside so the boatswain's mate can hand the mooring line to the linehandler on the pier. Any conning officer who must rely on a line-throwing gun is in need of our shiphandling course.—CDR D. L. Burson.

• *The photo is not staged; however, the ship in question may be innocent of all charges. The caption which accompanied the photo in the mail does not specify the activity in which the ship was engaged—which could just as easily have been underway replenishment.* ALL HANDS *jumped to an uncertain conclusion, and stands corrected. We are, however, happy to have the opportunity of hearing about the Amphibious School's shiphandler's course*—ED.

Academy Sports

SIR: On behalf of the Naval Academy Athletic Association, I want to express our deep thanks for your publishing of the article "Navy Sports at Annapolis" in the June 1975 issue of ALL HANDS.

Ms. Ellen Ratrie did an excellent and thorough job in writing this article. We are particularly pleased at how she touched on all aspects of the Naval Academy's intercollegiate and intramural programs. Even more important, she was able to convey the philosophy under which we operate our programs.—CAPT. J. O. Coppedge, USN(Ret)

• *Judging from the number of compliments we have received on Ms. Ellen Ratrie's article, your letter came as no surprise. Her description of the philosophy behind the intercollegiate and intramural programs, we feel, will do much to encourage America's top high school athletes to obtain appointments to attend the U. S. Naval Academy.*—ED.

Extensive Coverage

SIR: Thank you for the extensive coverage given Pacific Fleet units in the July 1975 issue of ALL HANDS.

A lot of men and women put in literally hundreds of thousands of hours supporting the fleet so they will be up and ready for both routine and emergency operations such as those described. I know it is sincerely appreciated by "All Hands" when their efforts receive such exposure—especially in full view of their peers worldwide. Bravo Zulu from all of us!—CAPT J. W. Stierman

• *Reports on various Pacific Fleet units would not have been possible were it not for the excellent cooperation we received from the public affairs officers of the individual ships.*—ED.

Red Sea Storm

SIR: In reference to the letter to the editor in your July 1975 issue entitled "Sand Dunes on the Fantail" and the editor's comment, "Can anyone top this?" USS *Miller* (DD 535) did top it. Instead of catching a sandstorm while in the narrow canal, which has sand on both sides, she was hit by such a storm while several miles out in the Red Sea in 1956. As a young seaman on my first ship, I was awed by this phenomenon and will long remember it.—YNC J. M. Lardner

• *The sandstorm you experienced in the Red Sea would seem to equal, if not surpass, that which hit* USS Opportune *in the Suez Canal.*—ED.

Legion's Freedom Bell

SIR: We appreciate your article on the American Freedom Train (ALL HANDS, June 1975, pp. 56-59) and your generous mention therein of the "Freedom Bell." However, we find it regrettable indeed that the article failed to mention the fact that the Freedom Bell is more accurately described as The American Legion's Freedom Bell.

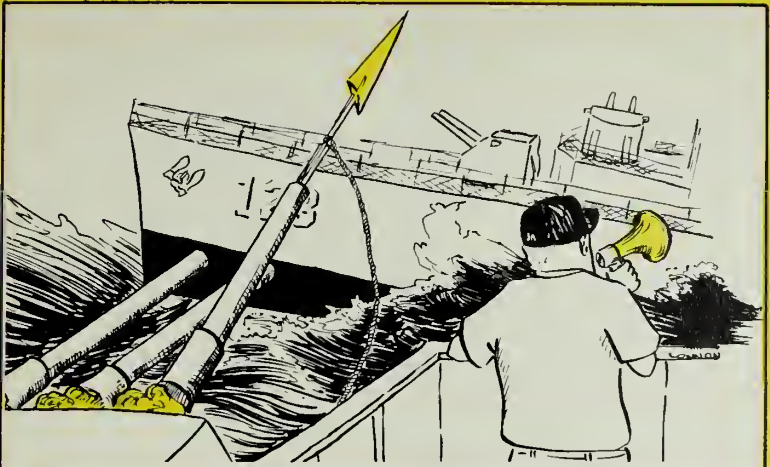
Our organization underwrote the entire cost of the Freedom Bell, which will be presented to the nation as a gift from America's children upon completion of the Freedom Train journey. American Legionnaires throughout the country are working to publicize the Freedom Bell and the Freedom Train to ensure the success of the project.

Your publication of this additional information would be very much appreciated. — James C. Watkins, Director, National Public Relations Division, The American Legion.

• *Thanks very much. We're always happy to give credit where credit is due. American Legionnaires are to be congratulated for their dedicated work on this project.*—ED.

on the serious side

LT Lawrence W. Lonnon



"We'll try one last time for you to secure the shotline, then we'll call it quits."

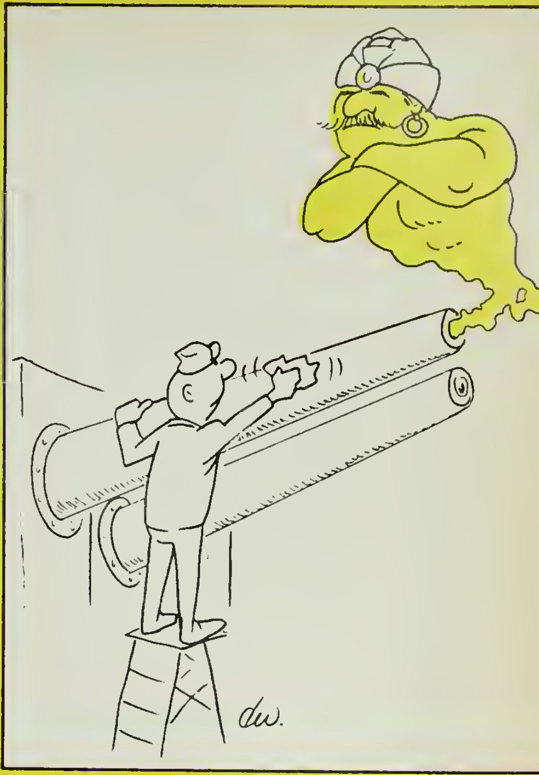
FTCM Robert Clinko

"Sure your drinks cost more than mine, you pay a Sir charge, Lieutenant."

SSGT F. L. Choat

"Keep your upper body forward, arms away from the chest, knees slightly bent, eyes on the swab head, . . ."

CTA1 Donald L. Winans



JOC Sam E. McCrum, Jr.

"Would you like us to add something to your broth?"

TAFFRAIL TALK

Navy Commander John A. Butterfield, Naval Attache in Iran, is the kind of friend anyone would do well to have around. While on leave in the states, he participated in the 79th annual Boston Marathon this Spring. CDR Butterfield escorted his blind friend, Harry Cordellos of San Francisco, to a blind runners' record time of 2 hours 57 minutes and 48 seconds over the 26-mile course.

A record 2041 started the race, with 899 finishing in under three hours. Butterfield and his companion recorded an 802nd place, which put them well above the halfway mark among the starters.

Several active duty Navy personnel participated in the marathon, including Lieutenant Commander William F. Hoss, stationed at the National Naval Medical Center, Bethesda, who was the first Navyman to finish the run, in a time of 2 hours 44 minutes. He placed 382nd.

Other Navy participants were Commander James A. Fady, Jr., Bureau of Medicine and Surgery; Lieutenant Commander Charles J. Day, Personnel Exchange Program, West German Naval Academy; Lieutenant Commander Wayne T. Humphreys, Naval Shipyard, Philadelphia; Lieutenant Robert B. Taylor, Bureau of Medicine and Surgery; and Captain Franklin Ruliffson, also of Bureau of Medicine and Surgery.

Commander Butterfield, outgoing president of Iran Roadrunners, was the first Navy runner to finish last year's marathon. Back in Tehran, the roadrunning enthusiast was busy promoting the sport. There are Persian marathons which are held periodically. CDR Butterfield says his roadrunning group is not out to make everyone a marathoner but they would like to encourage people to build up to a mile or two a day "to keep the doctor away."

When last heard from, CDR Butterfield was pushing the race for the Diplomat's Cup. Participating in that event were a number of members of Tehran's diplomatic corps, including the Indian and German ambassadors and several representatives of the Pakistani, Canadian, South African, British, Australian and American embassies. Included in the events of the day were an 800-meter team relay plus a one-mile and five-mile run.

* * *

In the "for what it's worth" department—ALL HANDS got a call the other day from a chief petty officer in the Bureau of Naval Personnel who added to our lore concerning the flap with 13 buttons on bell-bottom trousers. In our Bicentennial Issue (Page 61, August 1975) we stated, "Buttoned flaps were probably adopted because they could be opened quickly with one yank to get the pants off if one went overboard."

Our caller said that could well be the case but he also added that back in Holland, where he came from, fishermen commonly wore trousers with this style flap. However, he continued, the real purpose was that the trousers could be passed on from father to son and brother to younger brother. The trousers always fit the new owner by merely moving the button over.

The chief doubts that the dutch flap had 13 buttons but he added that, in case we doubted him, all we had to do was to go up to New England and see the commercial fishermen there. He said the New Englanders wear trousers very similar to those worn by the Dutch. Thanks to our caller, the case now seems buttoned up—or does it?

ALL HANDS The Magazine of the U. S. Navy, published for the information and interest of all members of the naval service, is issued monthly by the Navy Internal Relations Activity, Office of the Chief of Information, Room 2E329, Pentagon, Washington, D. C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35. Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

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ORIGINAL ARTICLES and information of general interest may be forwarded addressed to the Editor, ALL HANDS, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, 2221 Jefferson Davis Highway, Washington, D. C. 20360.

PERSONAL COPIES: The magazine is for sale by Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. The rate for ALL HANDS is $1.65 per copy; subscription price is $19.00 a year, domestic (including FPO and APO address for overseas mail); $23.75 foreign. Remittances should be made payable to the Superintendent of Documents and forwarded directly to the Government Printing Office at the above address. Subscriptions are accepted for one, two or three years.

Right: Guests gather at Newport News, Va., for the launching of the nuclear powered guided missile cruiser Texas (CGN 39).

TEXAS
39
NEWPORT

in this issue ......

USS NIMITZ on OPS in the NORTH ATLANTIC

ALL HANDS

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DECEMBER 1975

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ALL HANDS

MAGAZINE OF THE U. S. NAVY—53RD YEAR OF PUBLICATION

DECEMBER 1975 NUMBER 707

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Left: The guided missile cruiser USS Richmond K. Turner (CG 20) makes her approach on the Second Fleet flagship, USS Albany (CG 10), for a highline exercise. Photo by PH1 M. J. Browne.

FRONT AND BACK COVERS: Christmas is the cover theme and the subject is appropriately discussed in the lead article in this issue.—Front and back cover art by ALL HANDS staff artist Michael Tuffli.

Christmas in

In the Antarctic, the Christmas "holiday season" lasts for only a day. It is the one day of the summer support season when pressing schedules and the seven-day work week are temporarily set aside. Plastic Christmas trees emerge from storage boxes to be trimmed in the traditional style, complete with lights and ornaments. Gatherings take place in various "huts" and the religious side of the annual event is marked in McMurdo's Chapel of the Snows and at various inland stations. Cooks work around the clock in an effort to surpass everyone's expectations.

At the Antarctic's Williams Field, the planes stand a silent vigil—this is the 24-hour period when the aircraft preheaters are not heard—and men and women (some 16 of the latter) all rest from their battle with the clock to resupply the inland stations. In the States and elsewhere, Christmas is a joyous occasion. In the Antarctic, it is that contemplative time when everyone's thoughts are thousands of miles away, with their families, their children and their friends.

It will be a white Christmas again this year in the Antarctic—well, almost.

Snow will, of course, blanket the vast areas of the frigid continent (from two inches in the interior to 30 at McMurdo each year). But there will also be areas, including the main camp at McMurdo, which will have the usual supply of mud. However, OAEs (Old Antarctic Explorers) wade through it as easily as if crossing Main Street, USA, while newcomers plod along, yanking booted feet up and squishing them down, making slow progress from one point to another.

There are a total of 700 U. S. people in Antarctica this year, working in behalf of a scientific effort sponsored by the National Science Foundation which has the overall responsibility for the entire U. S. Antarctic program.

A large proportion of this year's "inhabitants" are Navy people, as usual. Making up the rest of the population of the "summer colonies" on the White Continent (our seasons are opposite in the Northern and Southern Hemispheres) are scientists and members of the Air Force, Coast Guard, Army and civilian contractors. It's a combined effort, military and civilian.

Women are getting to be a common sight in the Antarctic. This year Deep Freeze '76 has the largest contingent of the opposite sex in the history of operations on the White Continent. Four women officers, seven enlisted Navy women, two civilian Navy employees and numerous women scientists are deployed in the Antarctic.

The unit primarily responsible for "Operation Deep Freeze" is the U. S. Naval Support Force Antarctic (NSFA). NSFA is commanded by Captain Eugene W. Van Reeth, U. S. Navy. He has held this post for one year, and has had extensive prior Antarctic experience as the commanding officer of both VXE-6 and the Antarctic Support Activities.

Deep Freeze '76 actually began in late August of this year, when a group of 150 Navymen and scientists left Port Hueneme bound for Antarctica. This advance group began research projects and prepared facilities

the Antarctic

Above: Mountains at Cape Hallett, in the Antarctic.

at McMurdo Station for the arrival of the main body.

The initial flights took place between 28 August and 5 September, when two ski-equipped *Hercules* aircraft of Antarctic Development Squadron Six brought in 26 tons of cargo and 144 passengers from Christchurch, N. Z. The two aircraft made a total of five round-trip flights over more than 2000 miles of open water from New Zealand's South Island to Williams Field, McMurdo's "air station" on the ice.

First aircraft, piloted by the squadron's exec, Commander D. A. Desko, landed on his second pass at the runway. The second plane, piloted by Lieutenant Commander E. A. Cushing, could not find the field's skiway, but landed safely amidst swirling snow in a whiteout area several miles from the field. These aircraft delivered the first fresh food and 2900 pounds of mail to the 54 men who had spent the "wintering-over" months in isolation at the station.

That was the start of Task Force 199's 21st year of operations in the Antarctic, now operating out of Point Mugu and Port Hueneme. The squadron was originally based at Patuxent River, Md., in the mid-1950s and, later, was stationed at NAS Quonset Point, R. I.

The remainder of the Antarctic contingent have flown aboard Air Force C-141 *Starlifter* jet transports. These huge aircraft, like the Antarctic transports of yesteryear—the old, prop-driven *Globemasters*—operate only early in the Antarctic summer before temperatures rise, and the sea ice runway on McMurdo Sound begins to melt and crack.

Although most of the people arrive by air, along with supplies, at the beginning of the summer season, ships still bring in most of the heavy and bulk cargo. McMurdo Station is icebound for all but five weeks each year and U. S. Coast Guard icebreakers cut a channel for surface ships. This year, the Military Sealift Command's tanker USNS *Maumee* and the cargo ship USNS *Towle* were scheduled to bring in all the cargo needed to keep McMurdo and the other U. S. stations on the continent in operation for another year.

Even then, especially with fuel, conservation is the key word in the Antarctic. During the 1973-74 season, the Navy was able to cut fuel consumption in the Antarctic by 1.5 million gallons and another half-million gallons was cut during Deep Freeze 74-75. Without fuel, both for heating and aircraft, operations on the White Continent would grind to a halt.

Elements making up the Naval Support Force Antarctic, now flying out of California, are only 8500 miles from McMurdo Station, compared with the more than 11,000 miles they once traveled when they operated from the East Coast. The Seabees involved in the Antarctic effort now operate out of Port Hueneme, Calif. They, too, originally operated from the East Coast—Davisville, R. I.

American scientists working in the Antarctic are selected and funded by the National Science Foundation. Most come from universities or other federal agencies. Navy responsibility is in the areas of transportation, housing, maintenance of equipment, supplies and food. It also shuttles scientists between the stations and the field during the October-February Antarctic summer,

when the sun shines around the clock. Smaller groups of Navy men and civilian scientists remain at four U. S. stations on the ice through the Antarctic Night or the winter season. (In addition there are three U. S. stations now operating under contract, to which no Navy personnel are assigned.)

There was to be an added challenge for the members of Operation Deep Freeze. It called for on the scene recovery and repair of two aircraft that went down in last season's expedition. while retrieving a scientific party in East Antarctica, an LC-130 *Hercules* crashed during a takeoff attempt. The right wing caught fire and burned off.

The site of the accident, a region known as "Dome Charlie," rises to an altitude of more than 11,000 feet. The mean temperature is −30° Fahrenheit. Light winds of 10 miles per hour can drive the actual temperature to a windchill equivalent of −50°.

A second *Hercules*, diverted to rescue the first party, sustained damage several hours later when its nose gear collapsed on takeoff. No one in either the scientific party or the two aircrews was injured. A third "Herc" eventually brought all hands safely back to McMurdo Station.

As this year's operations started, a massive attempt got underway to repair the aircraft which had been downed at locations two and a half miles apart.

In November, a 14-man team of Navy Seabees was flown to the site to construct a campsite and runway on the snow and ice. They were scheduled to be followed by a team of 20 aircraft technicians from the

As ALL HANDS went to press, news arrived that the rugged ice-covered terrain had claimed still another aircraft, and plans for the recovery of the first two planes will have to wait until a later date. Work is now being concentrated on repair of the third aircraft, and it is hoped that it can be back in service by February.

While mechanical repairs in this part of the world represent a monumental task, the deterioration of equipment due to the weather itself is not as important a factor as elsewhere.

Antarctica, although covered with ice, is as barren and dry as the deserts of North Africa. Metals do not rust or deteriorate rapidly in this environment.

Repair in the field is nothing new for Antarctic Development Squadron Six, although this year's effort is the largest and most complicated to date. Back in the early 1960s, an air transport went down because of

Far left: Headed for divine services in the Antarctic. Left: Headed for yesterday. During an earlier Christmas season in the Antarctic, LCDR Jerry Smith along with three other members of Para Rescue Team from Antarctic Development Squadron Six (not pictured), made a jump over the South Pole. The team started the jump on 24 December but due to the geographic position of their landing site (on the other side of the International Dateline) it was 23 December when they touched ground. Above: Keeping warm in the ice. Above right: A warm greeting from Antarctica's seal population. Right: Main Street McMurdo.

contaminated fuel between McMurdo and Byrd Station at a place called Darbyville. That effort required a week of living out in the open while the tedious task of draining all the aircraft's fuel, filtering it, and transferring it back into the tanks was accomplished. On another occasion, one of the squadron's helos was the subject of an open-field engine change. The small repair crew—just like the one involved in the first incident—lived in survival tents nearby, cooked their own food and remained in the field until the job was accomplished.

While the Seabees, mechanics and technicians carry out their assignment at Dome Charlie, the scientific work continues with a full season of research in all major areas, at stations and field camps throughout the White Continent. The larger projects involve earth and biological sciences at McMurdo Station, upper atmospherics and meteorology at South Pole, very low frequency (VLF) radio transmissions and marine biology.

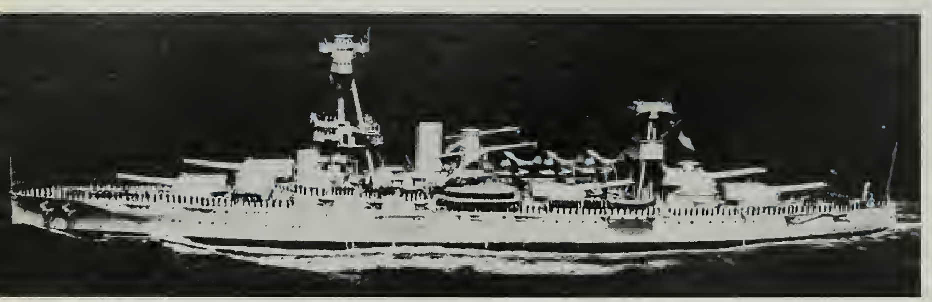
Deep Freeze dates back to 1955 when the United States prepared for the International Geophysical Year of 1957-58. Before then, a Navy Task Force led by Rear Admiral Richard E. Byrd undertook Operation High Jump in 1946-47, setting up its main base at Little America (long since broken away and drifted out to sea). Assaults before that were accomplished in the late 1920s and early 1930s (and again in 1940) by Byrd, who used one of his earlier Little America base camps as a jumping-off place for his famed 1929 conquest of the South Pole by air. Byrd's flight over the South Pole followed the tradition of heroism established down through the years with the achievements of Lieutenant Charles Wilkes (who first determined the Antarctic was a continent) and of Roald Amundsen, Robert Falcon Scott or Richard Shackleton, early in the century. Today, as in the past, the Antarctic is a place for daring deeds by rugged explorers.

An outsider may be prone to ask the reason for all the scientific effort in the Antarctic. The continent, larger than the combined areas of the U. S. and Mexico, contains secrets which have been buried for millions of years. When unlocked, these secrets can yield clues to the earth's formation countless years ago. Antarctica, then, is a vast scientific laboratory which holds untold secrets of the past and the future on ice.—J. F. C.

* * *

CHRISTMAS SHIPS....

Back in 1915, the battleship USS New York started it all—and now it's a growing tradition—"Christmas for kids."



Left: The beginning of a tradition. The battleship USS New York, the Navy's first "Christmas Ship." Above and right: Scenes from past Christmases celebrated by Navy ships and units around the world.

About the time for Saint Nick's annual visit, one often hears the familiar phrase that "Christmas is for kids." In a sense, that is a true statement—particularly in the Navy. The most rugged sailors have a soft spot in their hearts for the small fry. Children, worldwide, have witnessed the generosity of Navymen.

It all began back in 1915 with the battleship USS *New York* (BB 34). She was considered by those who knew her to be "pride of the fleet" for some three decades. She had an impressive record during two global conflicts, but one of her most notable contributions was in an area distinctly apart from war—she was tops in a field that was to become known as "community relations."

USS *New York* initiated a proud Navy tradition in 1915 when she became the Navy's first "Christmas ship." This term is perhaps best explained by *New York's* skipper at the time, the famed naval leader and then-Captain Hugh Rodman, who wrote about it later in an article published in 1931.

"We (the crew) asked 125 children to come . . . preferably those who had been orphaned during the war—especially the poor and more dependent. We originated the custom of going into the highways and byways at Christmas time, collecting those youngsters who otherwise would have no Christmas and bringing them on board after the ship had been elaborately decorated and prepared for their reception. We entertained them with dinner, children's games and a Christmas tree where toys were distributed and where each boy received a scout outfit and each girl a set of imitation furs."

Growing from this goodwill project aboard a battleship in 1915, and maturing into a year-round effort, the Navy's community relations programs have more than fulfilled a wish expressed by CAPT Rodman. He said, "I sincerely hope that it (the Christmas ship idea) will become custom for all Navy ships and will continue as one of the Navy's most proud traditions."

As most fleet sailors can tell you, the "Christmas ship" idea has survived the test of time and continues to be an integral part of the Navy's community relations efforts. Many of those same mighty warships which safeguard freedom of the seas throughout the year pause at Christmas to devote their time and energies toward helping underprivileged children and orphans enjoy a genuine Yule celebration.

Behind these parties lie the real meaning and spirit of the Christmas season. Let's take a look at a typical Navy ship preparing a Christmas party for some children.

Ice cream machines are doing double duty. The ship's cooks are working overtime to make sure the turkey, dressing, cranberries and pumpkin pie are just right. It will be a feast to remember for a whole year. In the CPO quarters, the chiefs are deciding among themselves who will play Santa Claus, with an unsuspecting 250-pound PO1 ahead in the balloting.

In other compartments, such as the engineroom or secluded storerooms, sailor-musicians are shaping up their program. Virtuosos of the guitar, accordion and harmonica, they practice the harmonizing which will shortly be one of the highlights of the afternoon's entertainment. Also brushing up on their acts are the ship's magicians with their bags of tricks.

Motion picture operators are in the "movie shack" setting aside all the animated cartoons. Meanwhile, Christmas records are being readied for the ship's closed-circuit entertainment system.

With the party only a few hours away, members of

the entertainment committee have a last-minute look at the kids' gifts, while the men working together on the decoration committee rig the crepe paper, streamers and balloons which will brighten up the Christmas tree in the mess deck.

Signs of the holiday are also evident outside the ship. High in the superstructure, the ship's carpenters rig wooden frames shaped like a star or a Christmas tree. On the weather decks below, electrician's mates spread out strings of colored lights that will be secured to the frames.

Finally the big moment arrives and the ship is filled with the sounds of laughter and screams as the children behold the sights about them. This is the reward for the sailors. The children's gleaming eyes and thankful expressions are all anyone could ask for or want in return for the planning, preparation and execution of such an event.

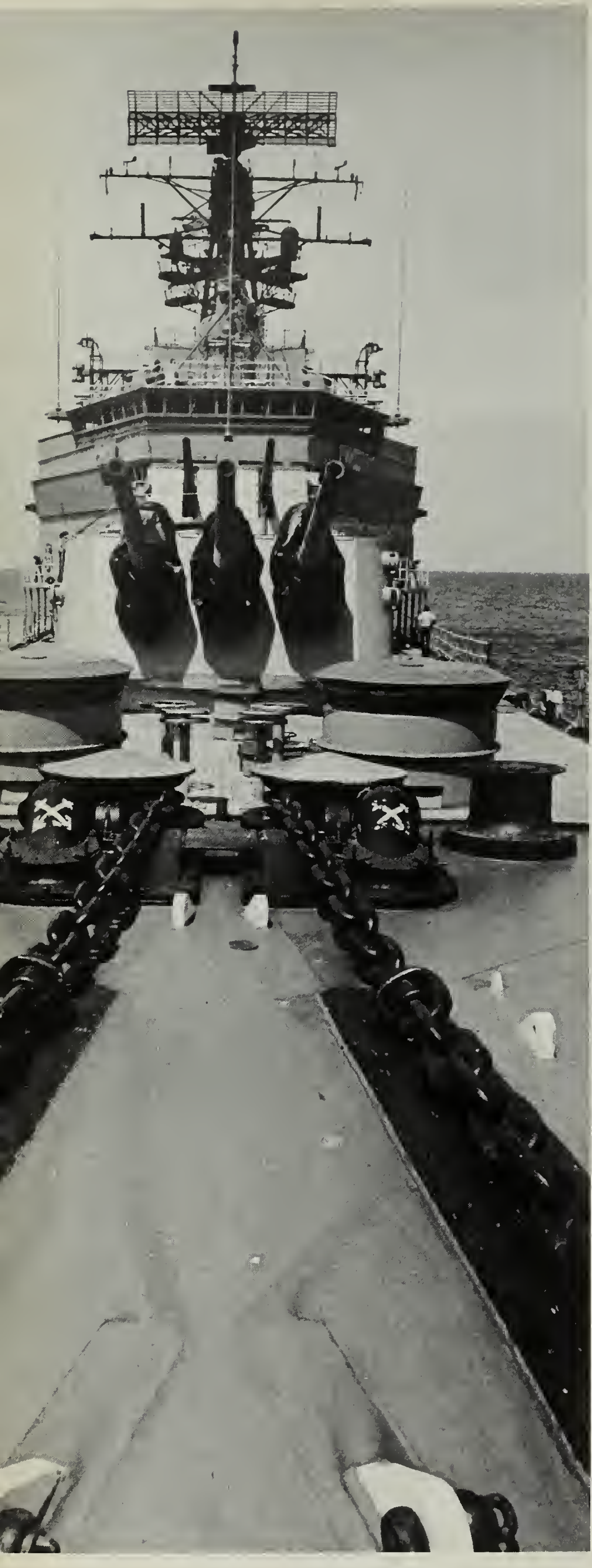
In this manner, a Navy ship carries out the custom begun by a thoughtful group of *New York* crewmen in 1915. This custom took hold during the 20s and 30s, suffered a necessary setback during World War II days, had a rapid revival soon after and has grown stronger ever since.

Part of today's strength is a result of Project Handclasp, a unique people-to-people program of the Navy which gathers and distributes needed supplies and commodities to friends overseas. Although an official program, it is unfunded. All goods are necessarily made available through donations from individuals, organizations and companies.

An average year sees nearly three million pounds of Project Handclasp supplies shipped overseas. A portion of these shipments contain the gifts, candy and other items which Navy ships use in helping orphans and underprivileged children enjoy a Christmas celebration.

The sailors who deliver these supplies are considered goodwill ambassadors by Navy officials, but to the youngsters who receive the goods, these men are their friends, very good friends at that. These children have a chance to enjoy, if only for that one time, the opportunity of feeling happiness—a special type of happiness which comes only from seeing and being a part of the glitter of Christmas.

—JOC K. Testorff



FATHER

"I've really learned a lot about the Navy on this cruise. I've chipped paint, scrubbed decks, holystoned, learned how to paint and touch up paint, and stood watches on the fantail, bridge and signal bridge. I even steered the ship for a while."

These comments from Cameron Toms, son of Commander J. E. Toms, attest to the success of the 20-day, 4000-mile, father-son cruise aboard the guided missile cruiser USS *Oklahoma City* (CLG 5).

Cameron Toms is one of 10 young men, ages 14 and older, who sailed with their fathers to Hong Kong and the Republic of the Philippines aboard the flagship of Vice Admiral Thomas B. Hayward, Commander Seventh Fleet. Purpose of the cruise was to give the sons a chance to experience the various aspects of life at sea, and give them a better understanding of their fathers' jobs.

Assigned to various departments and divisions aboard ship, they learned firsthand much of the work that is required to keep a Navy ship running smoothly.

"What surprised me most of all was the amount of work it takes to run a ship at sea," observed Mike Wickliffe, son of Chief Warrant Officer Charles T. Wickliffe.

Left: A view of the foc'sle and 6-inch and 5-inch gun mounts of the guided missile cruiser USS Oklahoma City (CG 5), taken during naval gunfire support operations in the Western Pacific. Photo by PHC C. R. Pedrick. Right: Two junior sailors try their hands at the bridge watch. Far right: A youngster prepares to stand a bridge watch as starboard lookout.

/ SON CRUISE

"We usually started work about six in the morning, and knocked off about four in the afternoon," explained Richard P. Murray, son of Captain Dermot A. Murray. "I was exposed to a variety of jobs which included chipping, sanding, painting and standing watch. I also helped when the ship refueled from an oiler."

David Shemanski, son of Chief Aerographer's Mate Ronald Shemanski, spent quite a bit of time working on deck, but he did have the chance to watch his father and learn a little bit of what goes into keeping the Fleet informed on important weather phenomena.

While in Hong Kong, 27 June through 2 July, the young men spent their liberty doing a variety of things including sightseeing and shopping. Frank Toy, III, son of Captain F. E. Toy, and J. Richard Bruner, son of Captain J. R. Bruner, remarked that the main reason they wanted to go on the cruise was "to visit and see Hong Kong."

Richmond, Frank and the other youthful mariners visited many of the city's famous landmarks including Victoria Peak, Tiger Balm Gardens and Aberdeen. Aberdeen is the home of the "Tanka," the boat people who live and work most of their life aboard their boats.

The Navy youngsters also browsed through some of

the thousands of shops that Hong Kong offers as one of the largest trade centers of the world.

John and Wallace Moyer, sons of Lieutenant Milton J. Moyer, thought that their visit to Hong Kong was one of the highlights of the cruise. They both enjoyed shopping in Hong Kong, and John said, "The work on deck may have been hard, but I had a lot of fun in Hong Kong and on the cruise."

Oklahoma City was in Subic Bay, Republic of the Philippines, 3-7 July, where the crew celebrated the Fourth of July holiday more than 6000 miles away from home under the tropical Philippine skies.

David Craig, son of Chief Fire Control Technician Francis R. Craig, visited Manila, largest city of the Philippines.

"I'm glad that I got to go," David said. "There was a lot to see and I made many new friends."

Ireneo Apostol, III, son of Chief Mess Management Specialist Ireneo S. Apostol, Jr., used the opportunity to visit his grandmother, and enjoy the various recreational activities offered by the U. S. naval complex at Subic Bay. Ireneo and the others also had the chance to visit local shops that offered wood carvings and other assorted objects produced by Filipino craftsmen.

Upon leaving the Philippines, en route to Japan where *Oklahoma City* is deployed under the Overseas Family Residence Program, the ship conducted air and surface gunnery exercises and gave her young riders a look at what happens on a ship during general quarters.

Captain Paul D. Butcher, commanding officer of *Oklahoma City*, said he enjoyed having the young men aboard and added, jokingly, "But they would never pass a personnel inspection with those haircuts."

And so ended a memorable experience for 10 young men. They may not be "old salts of the sea," but now they've got some idea of the hard work and long hours that go into keeping a Seventh Fleet ship combat ready, in accordance with its motto—"Ready Power For Peace."

They also found out that sailors really do have more fun!

—Story by JOSN George Kadinger
—Photos by PH1 Tom Geren and PH2 Al Johnson

Opposite page top: A crewmember (right) gives instruction in the use of the sound powered telephone. Middle: A young man learns how to handle the controls of one of the ship's boats. Bottom: Scrubbing down deck stanchions isn't so bad when it's all for fun. Above: Two of the youngsters look at Hong Kong from the harbor as they prepare for their first port of call. Below: The young men stand at divisional parade as the ship enters Hong Kong Harbor. Right: Father and son look over the Tiger Balm Gardens in Hong Kong.

FATHER/SON CRUISE

NAVY JUNIORS JOIN CREW OF USS HANCOCK

It was a memorable Navy Day for 200 youths. Relatives of Navy crewmembers boarded the aircraft carrier USS *Hancock* (CV 19) at Pearl Harbor on 13 October to ride the ship to San Diego.

Dubbed "Operation Tiger," the cruise from Hawaii to California was designed to give the visitors an opportunity to see the Navy firsthand. Aboard *Hancock* they became members of the crew and took part in normal ship activities.

The "tigers" had flown to Hawaii from the mainland over the Navy Day-Discoverers Day weekend. They

the WALDRON FAMILY

During a visit to Newport, R.I., Secretary of the Navy J. William Middendorf II learned of the Waldrons, a Machias, N.Y., family with eight sons who have served in the U.S. Navy. Noting this remarkable record, the Secretary wrote to the Waldrons saying, "I know it is no small task to raise sons and daughters who reflect credit upon themselves and their families with honorable service to their country. Therefore, your contribution to your country is very much appreciated by all of us who are part of today's Navy."

In replying to Secretary Middendorf's letter, Mrs. Glenn E. Waldron wrote, "With our sons, I feel we own a piece of the Navy. We have that nice, warm, inner pride that we are one of four families in the entire United States who have made a large contribution to our country."

Three Waldron boys are still on active duty, including Musician 1st Class Gene E. Waldron, of the Northeastern Navy Band, Newport. The other two are Chief Aviation Fire Control Technician Laverne R. Waldron, of Naval Air Station, Oceana, Va., and Aviation Antisubmarine Warfare Technician 2nd Class Michael W. Waldron, of Naval Air Station, Jacksonville, Fla.

A former Seabee, Gene plays baritone horn, an instrument he has been playing since high school. He switched his rating from heavy equipment operator following a stay at the School of Music in Little Creek, Va., and a stint with the Cruiser-Destroyer Force Band in Newport.

The first Waldron enlistee was Richard, a World War II veteran. Gene tagged along when Richard enlisted, but couldn't get in then because of his age; he was only 16 at the time.

"We all joined the Navy more or less to see the world," Gene said when asked why the Waldrons chose the Navy. "That's how Richard and I felt; I guess the others did too."

Michael is the youngest Waldron and when he enlisted the real significance of it all dawned on Mrs. Waldron. Though she had no objection, she "cried a bit," but quickly added, "I'm pretty proud of all of them."

Eight sons in the Navy, the Waldrons feel, is a small way of making a contribution to the nation. "We love our country very much," said Mrs. Waldron quietly. Mr. Waldron nodded his assent.

Mr. Waldron, 67, was too young to serve in World War I. And he had too many dependents (12 children) to get into uniform during World War II. During World War II, he said, his draft board told him: "When you hear that President Roosevelt has been drafted, then you're next!"

Now semiretired, Mr. Waldron is a district field supervisor for Green Thumb, in New York state. This is a program that employs senior citizens to do restoration and beautification work along the state's highways and on other state properties.

arrived in time to greet *Hancock* and her crew upon return from a seven-month Western Pacific deployment.

Hancock called at San Diego to drop off her young guests before proceeding to her home port, Alameda. About 20 Navy juniors of the guided missile frigate USS *Schofield* (FFG 3), steaming in company with the carrier, also participated in the operation.

The first "Operation Tiger" took place in June 1973 aboard the nuclear aircraft carrier USS *Enterprise* (CVN 65). That "tiger" trip was for the sons of POW/MIA/KIA personnel.

Operations such as this enhance the morale of Navy people as well as giving potential recruits a chance to learn about the Navy. "Tigers" are met at the airport by Hawaii-based Navy people and are taken to the host ship immediately upon arrival.

Guests who may arrive earlier than the time scheduled are housed in Navy barracks and given a tour of the naval base, the Submarine Museum and the Arizona Memorial. The youngsters are provided meals on base and the use of local recreational facilities.

Once aboard ship, they become a part of the crew—taking their places besides their relatives.

—JO1 L. Churilla

Both Mr. Waldron and son Gene, who did a six-month tour in Vietnam with a Seabee battalion, formerly drove heavy tractor trailers for several years. The head of the Waldron clan also did considerable rigging work during his lifetime.

Reminiscing about the early years, the Waldrons noted that the mortgage on their original seven-room home on 220 acres kept them poor for several years until they got it paid off. "We call the old place 'Flapjack Ranch' because we all survived on pancakes for three and one-half years," Mr. Waldron noted with a chuckle. "We were so poor that the mice never even bothered to come around." Mrs. Waldron added, "Our youngest son, Michael, had pancakes when he was six months old."

The other four Waldron sons with naval service include Lloyd, Thomas, David and Dennis. A ninth son and second youngest, Douglas, couldn't get into the Navy because of a punctured eardrum. He tried to enlist three times.

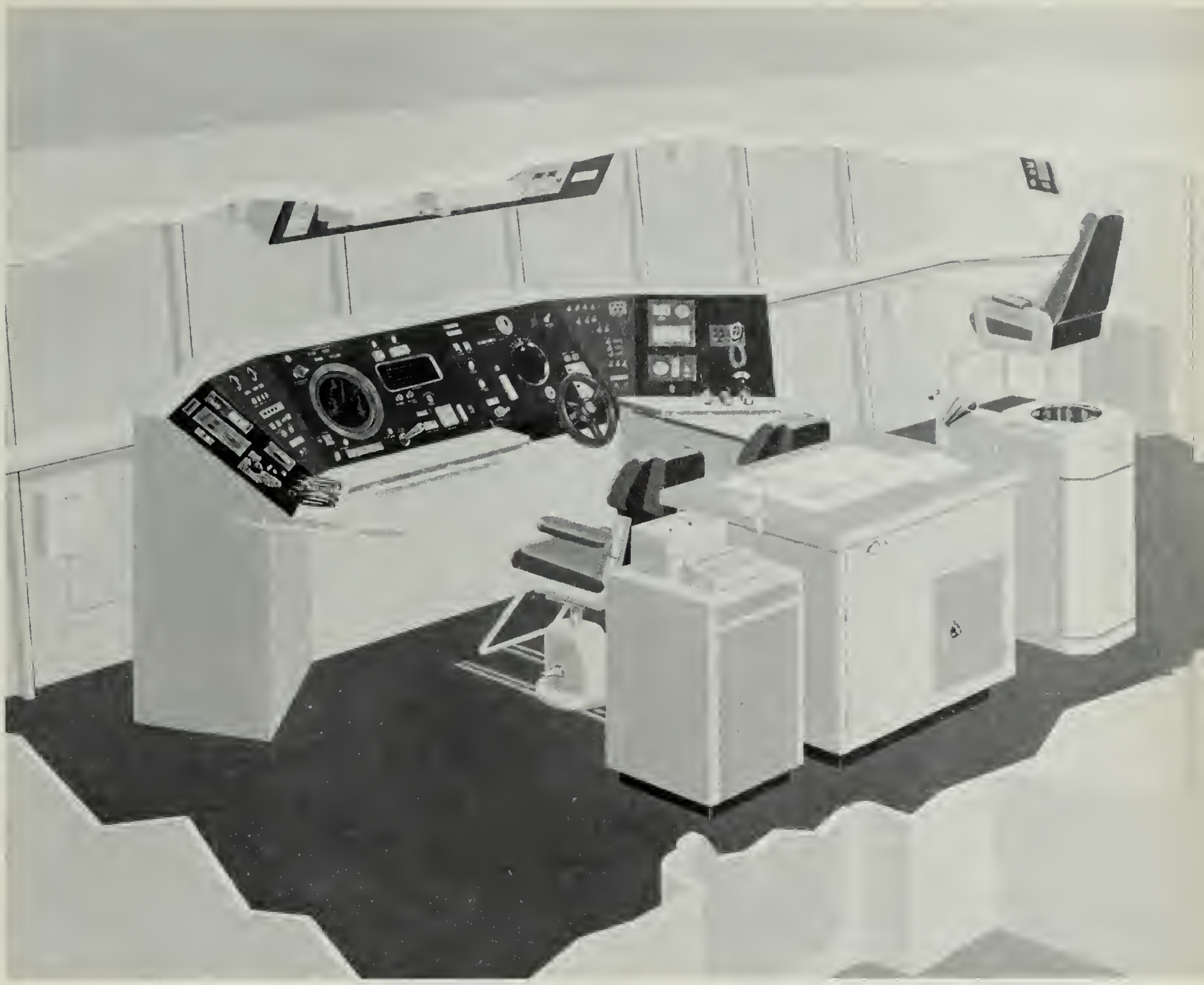
Besides their nine sons, the Waldrons have four daughters, 44 grandchildren, with two more on the way, and five great-grandchildren. Two grandchildren are in the Navy, one is in the Marine Corps and a fourth is an ex-Navyman. The Waldrons also have two nephews still in the Navy.

Left: Northeastern Navy Band Musician 1st Class Gene E. Waldron, right, one of eight brothers who have served or are serving in the Navy, looks over a family scrapbook with his parents Mr. and Mrs. Glen E. Waldron.

Shipboard Manning Reduction

"Right full rudder."
"Right full rudder, Sir."
"My rudder is right full, Sir."
"Come to course zero-niner-five."
"Come to course zero-niner-five, Sir."
"Steady as you go."
"Steady as you go, Sir."

USS Ponce (LPD 15) was one of some 18 ships participating during the early stages of research and development on the Integrated Bridge System program, designed to reduce watch requirements on the bridges of Navy ships. Some of the other ships participating in the R&D program are shown on the following pages.



Artist's concept of Integrated Bridge Console.

That spare dialog is as familiar to a Navy helmsman as is the sound of a gull's hungry wail to a cod fisherman.

Within a few years, however, that kind of dialog on the bridge of Navy ships may give way to a conversation with a tape recorder or even complete silence, as the Navy presses forward with its program for reducing ship manning levels. Like most other organizations, the Navy is caught in a financial squeeze between slowly rising income and rapidly rising costs.

"Pervasive throughout the Navy's developments is the demand for more reliable, more maintainable systems to reduce the pressure on our resources—fiscal, material and manpower," Navy Under Secretary David S. Potter told a Senate committee last year.

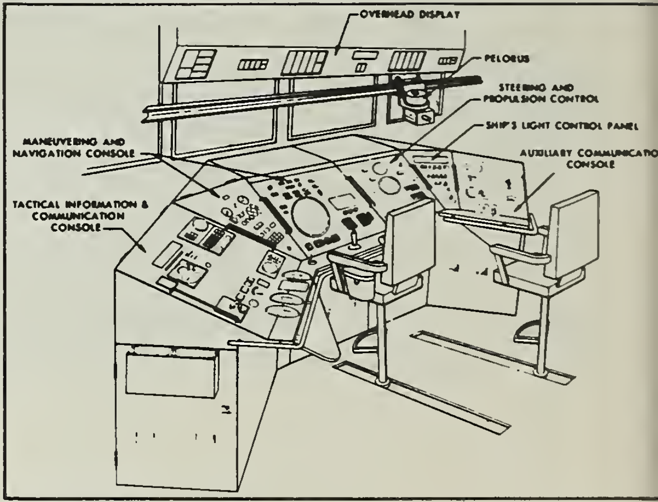
"In general," Dr. Potter said, "our designs are directed toward achieving platform capability of the future at about 30 per cent of the manning of comparable ships of today, yet possessing equivalent or greater capability."

Three years ago, faced with mounting manpower costs, an urgent need to start modernizing ships and the prospect of tighter budgets, the Chief of Naval Operations put out the word, "Reduce shipboard manning!" His directive set in motion a chain of events that could revolutionize the number of shipboard watchstanders and the shape of bridge and engineering spaces. As one working paper on the subject put it: "Designers of naval vessels can no longer make provision for and depend on the availability of large reserves of manpower. Ships now being designed will have sharply reduced crew sizes, and ships now in the planning stage will have tens of persons where we now have hundreds."

Tomorrow's naval ships, then, are expected to pack a terrific wallop with just one-third the crew size of today's vessels. While Navy researchers are taking a hard look at all the traditional watch requirements, they have focused mainly on ways to cut back on the number of bridge watchstanders.

They have designed a new "Integrated Bridge System" (IBS) which will permit most FF-type escort ships to cut the bridge watch team to a maximum of five persons: Officer of the Deck, Helmsman (Ship Control-

USS Tattnall (DDG 19)


OVERHEAD DISPLAY
PELORUS
STEERING AND PROPULSION CONTROL
SHIP'S LIGHT CONTROL PANEL
AUXILIARY COMMUNICATIO CONSOLE
MANEUVERING AND NAVIGATION CONSOLE
TACTICAL INFORMATION & COMMUNICATION CONSOLE

Integrated Bridge Console.

man, who also gives orders to Main Control), Quartermaster, Signalman and Forward Lookout (who could double as an assistant SM, if needed.) In a pinch, three well-trained watchstanders could handle the bridge. Only two are actually required to operate the IBS controls, which will be installed next year on an FF ship.

It is not idle speculation to suggest that one day Navy ships of this type will have only two men on the bridge and may even be able to operate during independent steaming with one. All of this will be made possible by a combination of factors:

- Automation of several functions now performed manually, including navigational problems, collision avoidance maneuvering and early warning of possible surface hazards, piloting in dangerous coastal or harbor waters, maneuvering to station, orders to the engine room, etc.
- Replacement of written logs, such as the Quartermaster's Log and Smooth Deck Log, with tape-recorded logs that do not require written entries.
- Transfer of tactical functions from the bridge to the Combat Information Center (CIC), leaving bridge personnel free to concentrate on safety factors related to control of the ship.

In this regard, the advent of reduced bridge manning will tie in neatly with the Navy's "Tactical Action Officer" concept. Combatant ships now come under the control of TAOs—who operate from CIC—during exercises and combat operations. One feature of the new IBS will enable the TAOs to exercise remote steering control of their ships. Two other features provide:

- Redesign of both internal and external communications, so that bridge personnel, with a minimum of confusion, have a constant and timely reading of what's going on aboard and around the ship.
- Monitoring of weapons firing to ensure the safety not only of one's own ship, but also of other ships and units in the vicinity.

The urgency of Navy manpower requirements relates not solely to the rapid rise in costs. It also has to do with the scarcity of qualified men and women, critical in some ratings, and with the increasing complexity of ships' systems. All of these factors combine to require more intensive recruiting and training efforts, so that costs tend to multiply.

In one report on the subject, Commander John Dachos of the David W. Taylor Naval Ship Research and Development Center (DTNSRDC), Annapolis, Md., said:

"Man is no longer an inexpensive commodity. In 1975, the cost of manpower, including pay and benefits, represents 65 per cent of the budget. In plain terms . . . the 'tradeoff' becomes fewer ships if the Navy does not utilize its human resources more effectively

"One man assigned during (new) ship development will add approximately five tons to the ship weight (in terms of added space he will occupy and equipment he will use) and $25 thousand to its building costs.

"Over a 20-year period this man will cost about $1.5 million in terms of pay, benefits and subsistence."

In short, according to Dachos and others who have closely examined the manpower problem, new ships should be designed with smaller crews in mind.

Labor-Saving Techniques

The IBS, conceptually developed in a joint effort by DTNSRDC, the Naval Air Development Center and Human Factors Research Inc., is one of those labor-saving techniques. It is significant not only because it makes possible a sharp reduction in the number of bridge watchstanders, but also because it is composed of parts that are well within the state of existing technology and do not require any major breakthroughs. The IBS is being designed and built at Great Neck, L. I.

In putting the IBS together, the designers considered the five major functions of the bridge:

- Ship safety, including safe maneuvering.
- Navigation and all the legal aspects of it.
- Communications, both internal and external, to receive and issue reports, instructions and inquiries.
- Log-keeping.
- Coordination of ship activities, not including tactical operations which are passed entirely to CIC.

With all of this in mind, the designers set about to build a system that would accommodate, at most, an OOD, SM, QM, Lookout and Helmsman (Ship Controlman). While others, for training purposes, could be on the bridge during one sort of evolution or another, adequate control of the ship needed only those five—or even as few as three.

Writing last April in the Naval Engineers Journal, IBS designers Lanny Puckett, Robert Gowen and Gerald Moe explained in some detail how the new system would work.

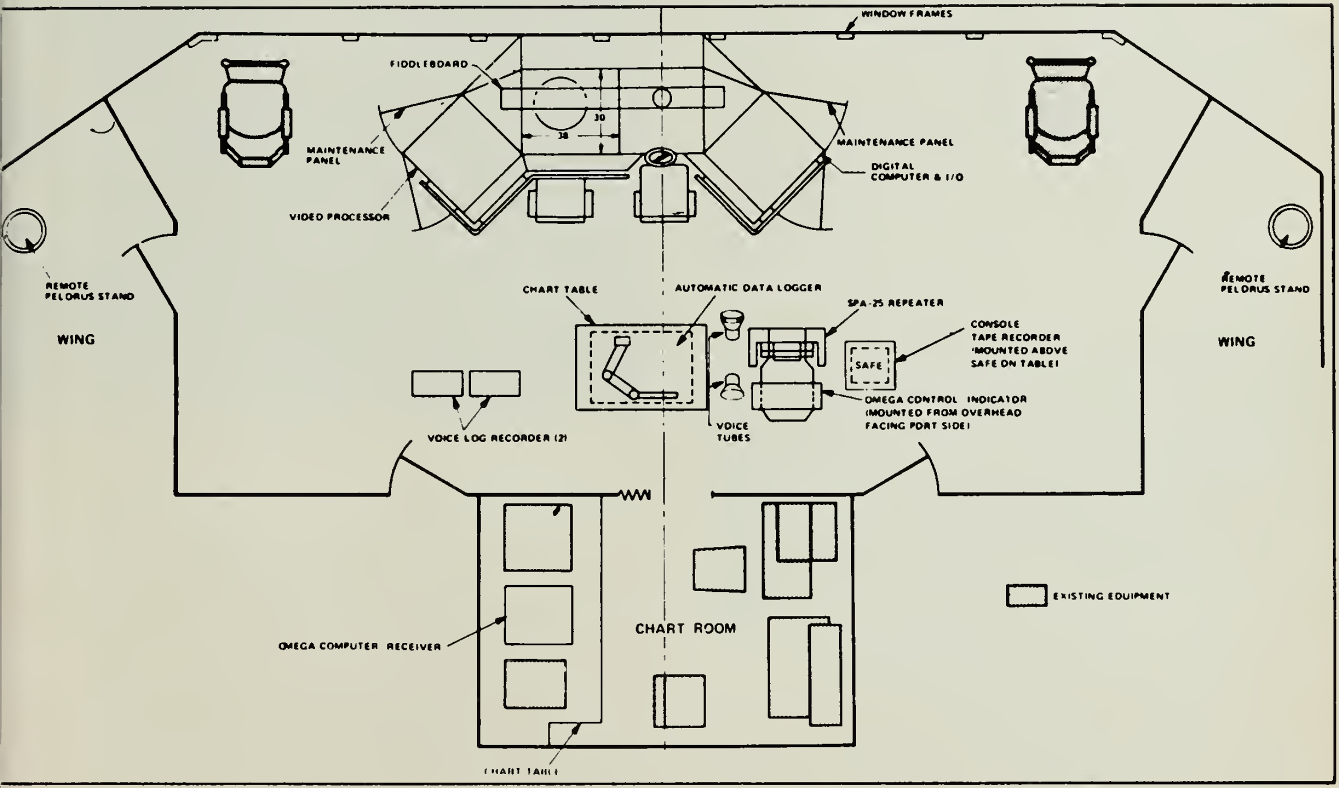
The first fully integrated IBS was designed for the bridge of an FF 1052 class of frigate, they said, because ". . . it is the newest combatant design presently at sea and because there are many ships in this class, (and this means) easier availability and larger applicability of the . . . design." However, the concept is applicable to other ship classes.

The design itself was based on a combination of computer and electronics hardware, all on the military or commercial market in one form or another, plus some practical experience in the fleet with reduced bridge manning under all kinds of conditions. Over the last two years, for instance, some 18 warships—ranging from DEs and CVAs to LPDs and AOs—have provided the testing platforms for both the manpower cutbacks and the various components that will go into the IBS "console" aboard the FF next year.

IBS Console

Some of the components were not integrated into the new console, but most were. Here is what the IBS console will include:

- An anticollision, piloting and maneuvering component.



AUDITRAC Recorder.

- Automatic open-sea navigation computer system.
- Auto-pilot for remote control steering and untended course steering.
- Integrated communications system.
- Alarm status board.
- Automatic logging system.

"The console," according to Puckett and his fellow designers, "during normal at-sea operations, will be operated by two men—the OOD and a Ship Controlman. The OOD may stand at the console or be free to move about the bridge. He will operate the left-hand half of the console—the Maneuvering and Navigation Console and the Tactical Information and Communications Console."

The right-hand half of the IBS console contains the steering and propulsion controls, ship's lights control panel, and communications equipment. It is operated by the Ship Control operator.

Located in the pilothouse, the IBS includes an overhead display board and movable pelorus. The display board gives a continuous reading of the ship's course, speed, water depth, and the time, all visible from any point on the bridge. The board also displays the ship's alarms.

Multipurpose System

So, what are the purposes of each of these console parts?

- First of all, the "anticollision" system is designed to do three things:

(1) Make automatic what now is done by crewmen; that is, to pick up, track and display information on surface targets—"skunks"—in order to avoid possible collisions.

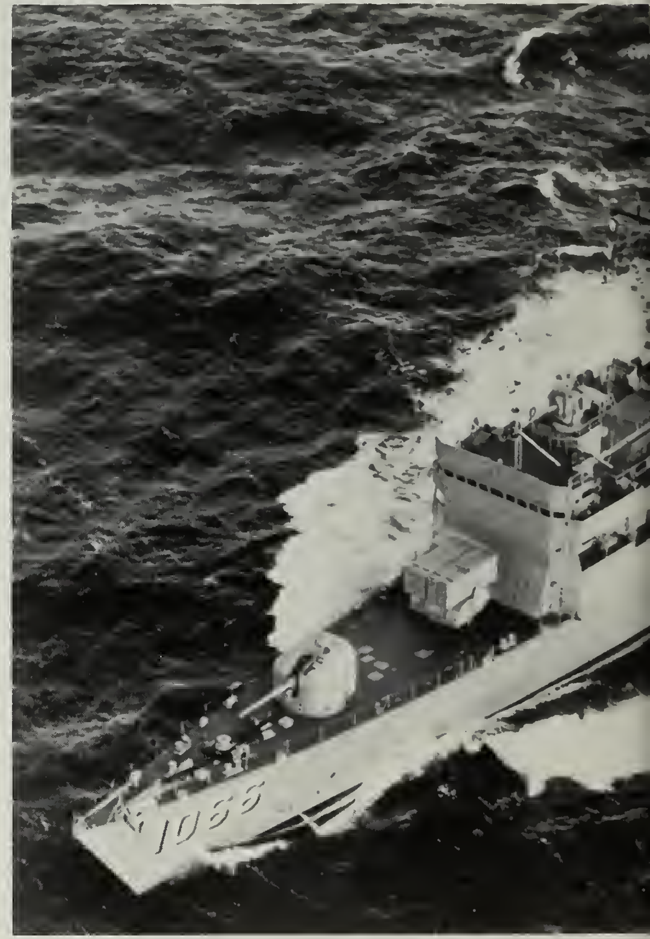
(2) Make automatic the job of determining where the ship is in relation to navigational hazards and fixed geographical features. This "piloting" aid should help reduce the navigation team's workload.

(3) Make automatic some computations now performed on the maneuvering board, such as recommended courses to take in going to stations, while steaming in formation, or in setting up ASW screens.

- Second, the "open-sea navigation" feature is designed to provide a "direct and continuously updated readout of the ship's latitude and longitude, using the OMEGA (radio) worldwide navigation system," Puckett said.

Again, this will reduce the quartermaster's workload and permit a reduction in QM ship assignments. The automatic OMEGA system, incidentally, already has been used successfully in some military ships and aircraft.

- Third, the "auto-pilot" permits both a system of "remote control" steering from CIC in tactical situations and a means of steering the ship automatically, according to preset headings. The latter feature operates on much the same principle as the automatic pilot on airplanes.



"This is essentially the same system," Puckett said, "that'll be going on all new Navy ships."

- Fourth, the "integrated communications" feature is "primarily a relocation of all the regular communications systems so that they are in one panel and readily available to one operator, especially the OOD," Puckett explained.

Within the OOD's reach, he said, will be the IMC and sound-powered phones, along with the radio and underwater telephone circuits for external communications.

- Fifth, the "integrated alarms status board" provides for an immediate reading on all the ship's alarms, whether activated by flooding or fire or by steering or propulsion casualties.
- Finally, the "automatic logging" system will contain three elements:

1) A digital recorder to log automatically all collision avoidance and piloting information on a magnetic tape. It allows for a playback of all maneuvering and piloting decisions.

2) A printout (or hard-copy data log) which records every change of course or speed, together with hourly positions and a regular chronicle of sea depths.

3) A continuously running voice tape recorder to "log" all voice communications—even casual conversation—on the bridge.

USS Marvin Shields (FF 1066).

"You could say the bridge is bugged," Puckett stated. "A significant feature of this is that it might reduce the noise level."

On most Navy ships now, he added, it takes one man almost full time to do the logging, and even then it is sometimes incomplete or inaccurate.

The "automatic logging" system is intended to reduce substantially manual logging and to eliminate the need for an extra hand on the bridge.

In addition to these major features, the IBS console and overhead display board will provide the bridge with other safety-related and propulsion information. The display board, for instance, includes a "manned and ready" display panel showing the status of personnel under various conditions—general quarters, special sea detail, replenishment detail, etc.

The IBS console has a "weapons advisory panel" to help the bridge watch team in monitoring weapons firing safety. This panel will show what weapons are being used and whether they are actually being aimed at intended targets.

The console also has a "single lever engine order telegraph and rpm device" so that one man can relay both commands to the appropriate propulsion stations.

In standing back and looking at the IBS console, Puckett said, "You can see essentially what we've done. We've consolidated several bridge functions, so that now one man, for example, can both steer the ship and operate the engine order telegraph. And all communications are within one man's easy reach.

"We should be looking at about a 50 per cent reduction in the manning on the bridge of a typical DD."

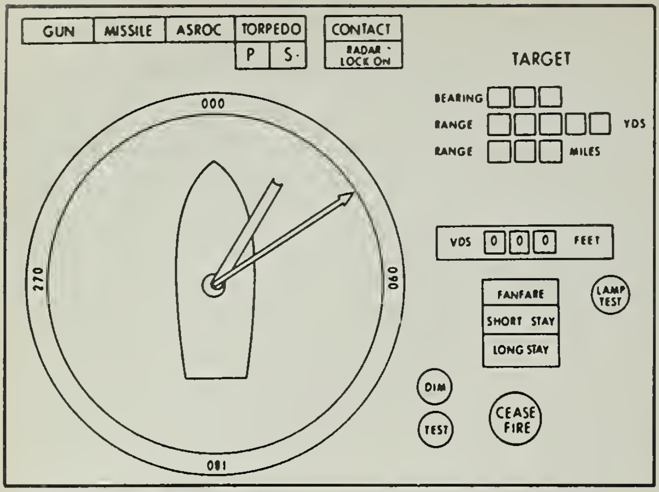
Besides achieving a substantial cutback in manpower, the automated bridge-tending system will have a major impact on training and readiness. Since fewer sailors will be needed for bridge watches, there will be a greater premium placed on their proficiency and attentiveness. Bridge watchstanders also will have to be somewhat more versatile than their forerunners, and know how to handle the navigational and propulsion consoles as well as the communications and taped logging systems.

A new rating—Ship Controlman—is likely to become a Navy standard. And there probably will be some movement soon toward the concept of "bridge watch teams," consisting of three to five members who stand watches together as a cohesive unit. (Larger ships with active air operations will need larger watch teams, of course.)

One of the chief recommendations in a DTNSRDC study on bridge manning was "to establish a stable team of personnel who are dedicated bridge watchstanders

AUDITRAC Monitor.

Integrated Bridge Plan Arrangement.



Weapons Advisory Panel.

and are especially trained and skilled in the ship control functions.'' Since the objective is to cut back on the number of seagoing sailors, the IBS has been designed so that there will be no need for additional Electronic Technicians (ET) or Interior Communications Electricians (IC) aboard the ships fitted with the new IBS consoles.

Instead, the Navy plans to provide some additional schooling for these ratings, largely on the theory that since the new IBS components are within current ''state-of-the-art'' technology, qualified repairmen should be readily available to keep the components operating without any elaborate retraining or additional personnel.

Engineering Manning

Though it may be slower in coming, the same shipboard manning reduction program will be applied to the engineering spaces.

A 1967 study conducted by the Center for Naval Analyses showed that in existing FF 1052-1097 type ships, engineering department billets could be reduced by 11 men if certain steps were taken to automate some of the steam propulsion watch requirements. This would have been possible without any change in the ships' basic design.

In new ships, designed expressly with an eye toward manpower savings, the engineering billets might be cut considerably more. Many fleet-savvy Navy researchers believe that the engineering spaces provide more fertile ground for manning reductions than the bridge.

In one study, Navy researchers found engineering manning in one FF could safely—and profitably—be cut from 17 to 8 men per watch with an actual increase in the amount of time devoted to maintenance, all at a cost savings of $264,000 a year. Freeing BTs, EMs, MMs and ENs for more available hours of preventive maintenance and repair of equipment can be accomplished through automation of certain propulsion controls, backup systems and safety devices. Understandably not all engineering repairs and maintenance can be accomplished underway, but savings in this area would certainly benefit the fleet.

There are several reasons why many say the need for automation in the propulsion stations is even more compelling than in the ship control stations. For one thing, there are temporary shortages of trained and qualified persons, particularly in the middle enlisted pay grades.

In addition, working conditions play a role in these problems, Navy officials say. Long, hot, noisy and arduous hours spent in engineering spaces, both standing watches and performing maintenance, could perhaps be shortened substantially if some engineering duties could be turned over to electronically controlled machines. Fewer people on watch means more people available to assist with maintenance and repairs.

About a year ago, an article in the Naval Engineers Journal identified some other advantages from a well-designed manning reduction plan. From a tactical standpoint, they found, naval combat effectiveness could be improved with smaller crews, providing the operational personnel were well-trained and honed to a high state of readiness.

''If personnel can be removed, payload can be increased. By reducing the 'hotel load,' berthing spaces can be converted into fuel tanks or missile magazines. The increase in both range and firepower by trading off personnel in well-designed ships can be substantial.''

As an example, the article stated that by reducing the number of persons through which tactical directions are passed, ships could achieve a ''faster tactical response.''

Over the next few years, then, what's in store for bridge and engineering watchstanders?

If current trends hold, watchstanders can probably count on a steady increase in the number of jobs they perform being turned over to machines.

At the same time, they will be expected to maintain their manual and computational skills as backups to the machines.

They also can count on intensified training programs to equip them for the new demands that automated watchstanding will impose on those who become members of watch teams.

Bridge watchstanders, for instance, will be expected to know how to operate the space-age navigational, maneuvering and propulsion consoles. With engineering watchstanding requirements reduced, more time is available for monitoring, maintaining and repairing the machinery systems.

USS Nashville (LPD 13).

In both cases, these watchstanders will become skilled adjuncts to the surface and air warfare teams that will assume tactical control of ships during exercises and combat operations.

In essence, the traditional ways of "driving" ships may undergo some sweeping changes. A quiet revolution may soon occur.

—Story by LCDR David Hess, USNR-R

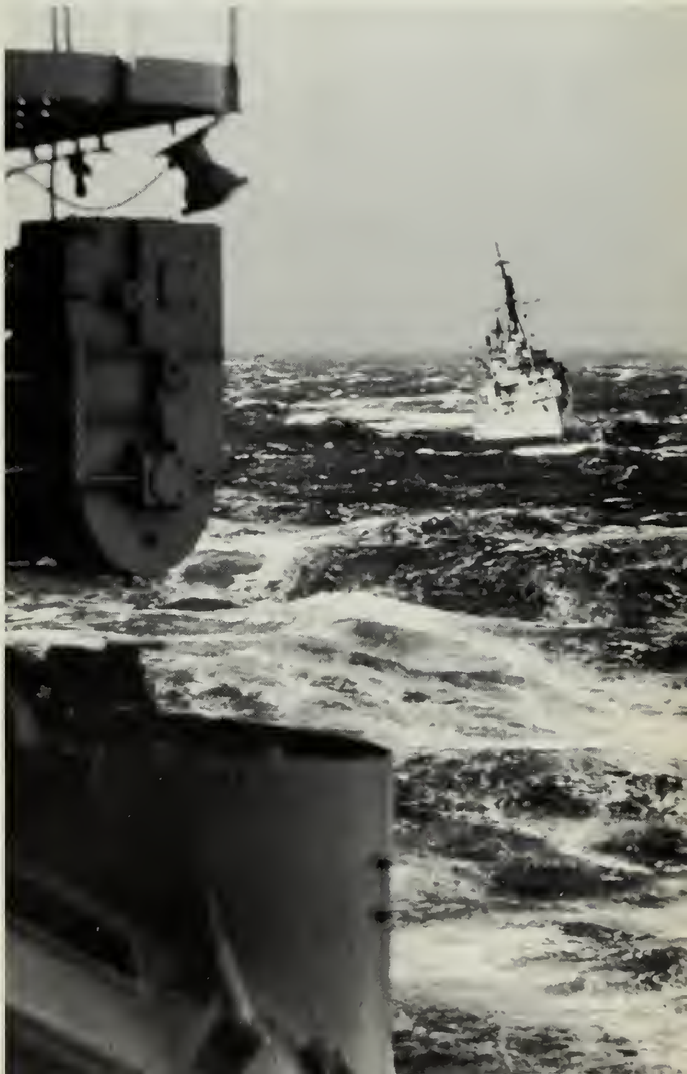
About the author—LCDR David Hess, USNR-R, is affiliated with Individual Reserve Unit (IRU)-106, Alexandria, Va. A 13-year Reservist, Hess is currently teaching "Strategy & Policy," a Naval War College course, to Naval Reserve officers. In civilian life, Hess is a reporter with the Washington bureau of Knight Newspapers.)

During the early stages of research and development on the Integrated Bridge System program, designed to reduce watch requirements on the bridges of combatant ships, the following ships participated:

USS Constellation (CVA 64)
USS Forrestal (CVA 59)
USS England (CG 22)
USS Tattnall (DDG 19)
USS Buchanan (DDG 14)
USS Jonas Ingram (DD 938)
USS Meredith (DD 890)
USS Stribling (DD 867)
USS Hamner (DD 718)
USS Marvin Shields (FF 1066)
USS W. S. Sims (FF 1059)
USS Roark (FF 1053)
USS Lockwood (FF 1064)
USS Ponce (LPD 15)
USS Dubuque (LPD 8)
USS Nashville (LPD 13)
USS Detroit (AOE 4)
USS Ponchatoula (AO 148)

ComPhibRon Six and ComDesRon Twenty-Six also took part in the initial research and fleet testing program.

USS Stribling (DD 867).



A Date With M

Above left: Ms. Shirley Cothran, Miss America 1975. Above right: Miss America (center) with her six runners up. Right: The seven members of the Miss America USO show and their escorts on the Little Rock gangway.

Sailors aboard ships of the U. S. Sixth Fleet recently hosted Miss America 1975, Shirley Cothran, and her six runners-up. This USO-sponsored show marked the first time any reigning Miss America had entertained military men aboard ships in the Mediterranean.

Besides Miss Cothran, who is also Miss Texas, the six individual state beauty queens on board Kennedy were: Rhonda Pope, Miss Arkansas; Susan Griffin, Miss North Carolina; Karen Smith, Miss Kansas; Cheryl Johnson, Miss Wyoming; Lucianne Buchanan, Miss California; and Kristen Krull, Miss New York.

Seven sailors aboard USS *Little Rock* (CG 4) had the honor of acting as escorts for Miss America and her court during their stay aboard the flagship. Escorting Miss America was Machinist's Mate 2nd Class William F. Taylor. Acting as escorts for the other beauty queens were: Hospital Corpsman 3rd Class Gary W. Ivey, Boatswain's Mate 3rd Class Hans M. Naggor, Lance Corporal John E. Knight, Quartermaster 2nd Class Cristopher J. O'Donald, Personnelman Seaman Daniel R. Sugs and Operations Specialist 1st Class M. L. "Pepper" Seaman.

In escorting Miss America and her court of beauty queens from various states, the sailors had the opportunity to chat with the ladies about the latest news and conditions back home. The escorts also took the ladies to dinner, a festive meal aboard *Little Rock*.

During the stage performance, the ladies proved a remarkably versatile group. Miss New York, Christina Crowe, did an outstanding tap dance to Elton John's "Philadelphia Freedom." Gymnast Miss Kansas, Karen Smith, did single-hand flips, cartwheels and other graceful acrobatics that had the audience cheering. Dressed in black and gold, Miss Wyoming, Cheryl Johnson, added her soulful modern dance steps to the song "Scorpio."

Also presented during the Miss America Show was a flute solo by Miss America, Shirley Cothran, backed up with dance steps by Miss Wyoming and Miss North Carolina, Susan Griffin. The seven performers did a Broadway routine complete with hats and canes. Voicing the feelings of sailors' sweethearts about the Navy, Misses America, California and North Carolina sang a version of the popular song, "Blue Navy, Blue."

There was audience participation also—the girls did several routines with assistance from the crew. Choosing their partners they illustrated, in song and dance, "Ole Soft Shoe." Toward the end of the performance, the girls again used volunteers to take part in doing the latest dance steps from the States, the "Bump" and the "Hustle."

Following the performance aboard *Little Rock*, the Miss America troupe left for Naples, Italy, and the aircraft carrier USS *John F. Kennedy* (CV 67). This concluded a tour that took the girls to military installations in Spain, Morocco, Turkey and Italy.

ISS AMERICA

DIVING PHOTOGR

APHERS

Members of Pacific Fleet Combat Camera Group's Diving Division don't need fish-eye lenses on their cameras to get a fish-eye view. The five-man unit is charged with providing underwater photographic coverage within the Pacific Fleet area.

"We're the only Navy underwater photographic team on the West Coast," says Photographer 2nd Class Harry Kulu, the division's diving supervisor. "There's a heck of a lot of water in the Pacific, so our area of operations is quite extensive."

Capabilities of the team include still, motion picture and videotape for television.

There is no formal school for underwater photographers in the Navy. A limited number of PH "A" School graduates are selected for training as scuba divers upon graduation.

"Most of what we learn in underwater photography comes through practical experience," said Kulu. "Several years ago I attended the underwater photo course at Brooks Institute of Photography in Santa Barbara, Calif. I almost ended up teaching the course because of my Navy experience."

Previous diving experience varies greatly among the camera group's underwater PHs. "I never dived before I volunteered for the underwater photography," remarks PH2 Pete Romano.

For PH3 Bob Outwater, the team's newest member, an avid interest and five years' experience in sport diving provided the steppingstone to his assignment to Second Class Diver's School in San Diego and placement as a Navy underwater PH.

The division is called upon to perform a variety of tasks. Recent requests for their services include the photographing of seal training at Naval Undersea Center San Diego and a Navy Birthday slide presentation for the Second Class Diver's School.

"Primarily our concern is with any unit under Commander in Chief Pacific Fleet," states Chief Warrant Officer F. K. Hudek, the command's diving officer, "but at long as it's approved, we'll accept work from any branch of service or civil unit."

"It's really an interesting job," say Romano. "We always dive as a team, but once you're in the water it becomes more or less an individual effort to get the job done."

I guess you could say it's a fun job, but it doesn't come without its problems," adds PH3 Outwater. "Sometimes there's a lot of hassle with visibility and light levels."

Whatever the conditions, the PFCCG diving division continues to provide underwater photographic coverage for the West Coast. Any organization west of the Mississippi desiring a true fish-eye view should submit its request to the Commander in Chief Pacific Fleet in accordance with CINCPACFLT instruction 3150.1G.

—Photos by PH2 Bruce Richards

CITIZEN SAILORS 1975

In 1775, American citizen-sailors played an important role in securing our independence. Usually fishermen or farmers by trade, these citizen-sailors made up the "mosquito navy" and assumed the tasks of harassing enemy shipping, protecting against seaborne raids and keeping coastal communications open.

Two hundred years later, the fishermen and farmers have been joined by engineers, technicians, factory workers and other men and women from every walk of life. They still are active in the Naval Reserve and play an important role in the nation's defense. But, it's not the "mosquito Navy" any more. Today, these citizen-sailors are better organized, better trained, and operate with the most modern naval equipment and ships in the world.

The key word for 1975 citizen-sailors is training. Until quite recently, Naval Reservists often performed their active duty as individuals or in small groups at scattered locations. Assignments sometimes had little to do with the mission of their home units.

Thanks to new concepts in Reserve training, many Reservists now train as a unit at the location where they would be mobilized in case of national emergency. The value of unit training was pointed up recently when Naval Reserve Beach Group 106 from Washington,

D. C., with components throughout the Southeast, underwent two weeks of active duty training at Little Creek (Va.) Amphibious Base.

"These Reservists have come a long way in the last two weeks," said Captain George T. Dyer, commander of Naval Beach Group Two at Little Creek. He made the comment as Beach Group Two wrapped up two weeks of intensive training with more than 300 Beach Group Reservists.

Training ended with a two-day amphibious assault exercise at Fort Story in Virginia Beach. "This amphibious landing exercise was especially tailored to emphasize the Naval Beach Group's supporting role in amphibious operations," the captain said. "It was designed to test the success of the two-week Reserve training program just completed."

The Reservists' two-week training period leading up to the actual amphibious assault included subjects ranging from how to climb down a landing net on the side of a ship and fight on the beach, to the safest way to operate a forklift on the ramp of a landing ship.

Under the new concept, units such as Reserve Beach Group 106 train with their active-duty counterparts whenever practical, thus providing "hands-on" training with the active-duty sailors whom the Reservists would support if activated.

Other units participating with the Reserve Beach Group Staff 106 were: Amphibious Construction Battalion 106 from Roanoke, Va.; Beachmaster Unit 106 from Baltimore, Md.; and Reserve Cargo Handling Batallion (RCHB) 407. RCHB 407 brought to Norfolk detachments from Charlotte and Wilmington, N.C.; Charleston, Columbia and Greenville, S.C.; Atlanta, Ga.; and Tampa, Fla.

In the event of a national emergency, these Reserve units would report to, and augment, Naval Beach Group Two at Little Creek Amphibious Base.

According to many Reservists participating in the Little Creek exercise, this type of training also is improving morale. "We know we're doing something worthwhile," explained one Reserve petty offer. "It's great to feel we're a working part of the Navy team."

The "mosquito navy" of 200 years ago has matured and now has a "big sting." These citizen-sailors continue to build on a proud tradition as part of the United States Naval Reserve.

—Story by JOC Joe Sarver
—Photos by PH1 Milt Putnam and PH2 Mike McCabe

Left: Reserve Navy cargo handling and Port Group personnel prepare to set up a field kitchen. Below: Reservists practice loading equipment during amphibious training at Little Creek Naval Amphibious Base. Above right: Mobile Repair Van containing a complete machinery repair shop is loaded aboard. Right: Beachmaster directs trucks fording the surf between landing craft and beach.

A Tradition For Over 600 Years

'FREE MEN AND

When the work becomes tedious, and the watches too numerous, 122 officers and enlisted men of the U. S. Naval Aviation Weapons Facility, R.A.F. St. Mawgan, England, can take solace in a unique status they share: "Free Men and Honorary Citizens" of the Parish Town of St. Columb, Cornwall, United Kingdom.

Their "freedom" may still be subject to Navy and command regulations. But, by Parish law dating back many centuries, personnel at this facility can enjoy privileges like "selling goods on market day without paying taxes" and freedom within the town limits plus numerous special privileges.

It's all part of a local tradition dating back to 1332—one in which these few Americans recently had the rare privilege of taking part.

St. Columb is the first and only parish in the United Kingdom to affiliate formally with U. S. military units. Acceptance of the invitation permanently sealed a bond of friendship and citizenship between the Americans and the people of St. Columb. The occasion also marked the second anniversary of the formal affiliation of the town and parish of St. Columb with the British Royal Air Force at St. Mawgan.

A market town governed by a Parish Council, St. Columb is presided over by an elected chairman. Located four miles from St. Mawgan, it is a closely knit community, intensely proud of its origins and magnanimous in its hospitality. Many of its buildings can be traced to 1100. Its church is resting place for the remains of Sir John Arundel, the first of a long line of nobles leading to the present Duke of Norfolk.

Arundel, Lord of the Manor, joined King Henry II

HONORARY CITIZENS'

OF ST. COLUMB, CORNWALL

in 1332 to fight for the crown in Scotland. After a successful campaign, the King granted to Sir John any privilege he desired as a reward for faithful duty. He asked that his city of St. Columb be given a charter of incorporation, which was the market town charter. This was a great privilege that, in turn, permitted declaration of market days during which serfs and peasants working the land could sell their produce in the town without paying a percentage to the Lord of the Manor. It allowed tax-free enterprise on certain days, and freedoms to persons within town limits without punishment for misdemeanors.

In the early days this meant freedom from debt, within the city limits, to designated people and resembled modern-day diplomatic immunity. It was the highest honor that could be bestowed and signified complete trust in those to whom the privileges were extended.

St. Columb remained a market town and, in 1894, it was declared a Parish with its own governing body. The Parish began granting certain freedoms as "freedom of the city" or affiliation, an honor that can only be bestowed to individuals or groups by towns and cities declared "ancient" by royal charter.

The Royal Air Force at St. Mawgan was formally affiliated with the Parish in 1973. St. Columb was, then, the only Parish to have ever extended this privilege to a unit of the Queen's forces. U. S. military personnel have resided in St. Columb since 1965.

The main address at the invitation to the U. S. Navy to affiliate was given by Mrs. Kathleen Hawkins, Parish Councilwoman, and the acceptance speech was made by Commander P. O. Rae, commanding officer of the Naval Aviation Weapons Facility. Following the speeches, the Navy Department crest and the St. Columb badge were exchanged to signify the importance of the honor. Navy and Marine Corps members then marched through the town streets in exercise of their rights and privileges as Free Men of the Parish. They were accompanied by R.A.F. contingents from St. Mawgan, and the R.A.F. Western Band.

After the parade a reception was held in the Old Rectory on the edge of town. There, members of the Parish Council and the American representatives signed the Parish Registry as a matter of historical record. Predated to the time of Queen Elizabeth I, the registry is now a permanent part of the British National Archives and was returned to St. Columb for the ceremony.

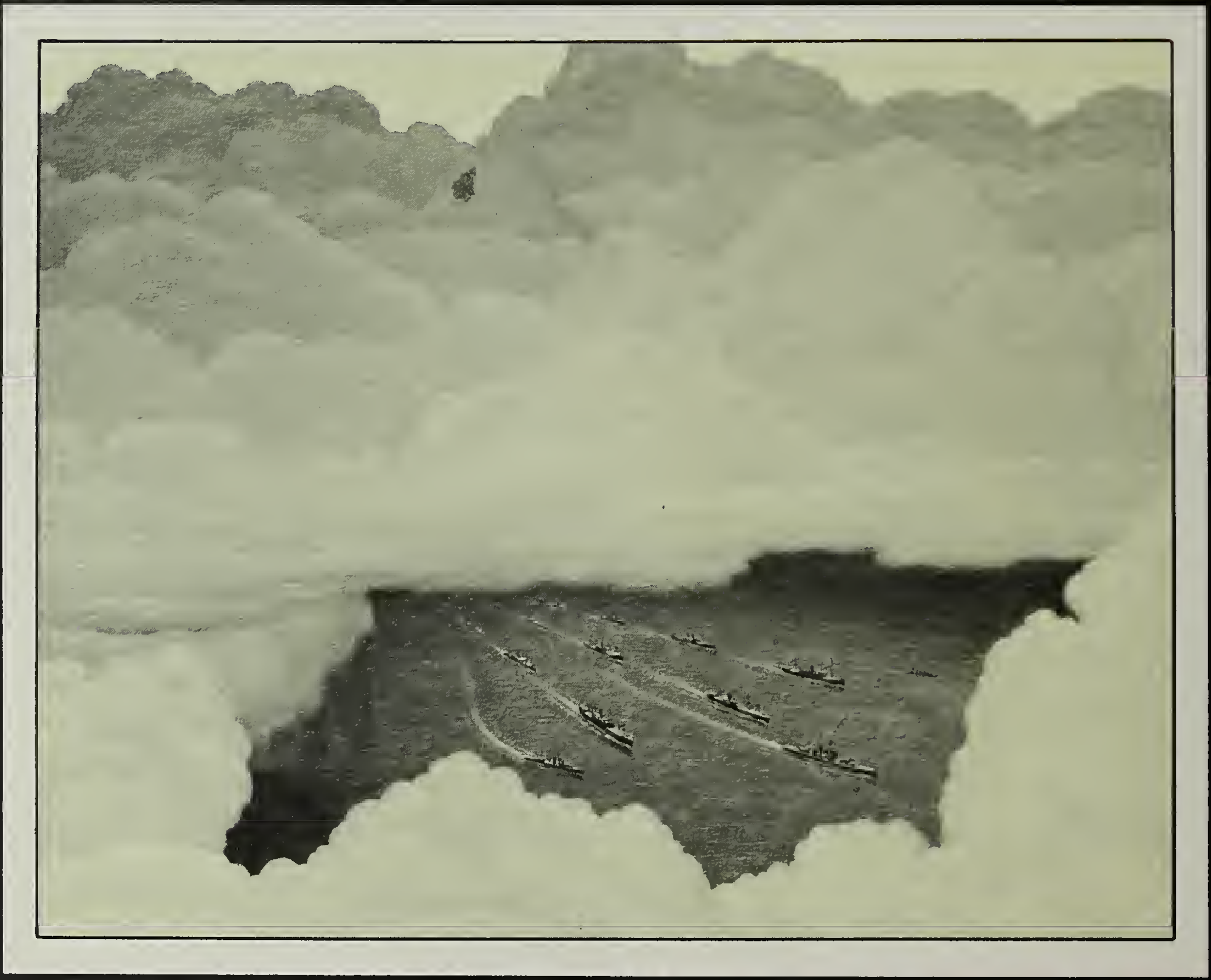
In the evening, teams from the town, the South Ward of the Parish, the R.A.F., and the American Facility competed in sporting games. The R.A.F. Dance Orchestra then played for an open-air ball and a ram roast topped off the merging of communities.

—Story and Photos by JO1 Chris Christensen

Facing page top: Commander P. O. Rae, Commanding Officer, U. S. Naval Aviation Weapons Facility, St. Mawgan, signs the Parish Registry to record officially the formal affiliation of the naval activity with the Parish Town of St. Columb. L to R across the bottom: U. S. Navy and Marine Corps members march through the streets of St. Columb. Presentation of plaque from the Parish Council to CDR Rae symbolizes the recognition of U. S. sailors as honorary British citizens. Mrs. Kathleen Hawkins, Parish Council Chairman. Below: Mrs. Hawkins inspects Navy ranks accompanied by Group Captain H. M. Archer, Station Commander, Royal Air Force, St. Mawgan.

NAVY COMBAT ART

Pacific Convoy From 12 Thousand Feet—Griffith B. Coale.



Refueling at Sea—Walter Brightwell.

The Navy Combat Art collection, an officially designated "American national treasure," consists of some 4500 artworks, including paintings, sketches and other graphic forms, and grows by about 100 pieces a year. Its worth in intrinsic or historical terms is impossible to evaluate.

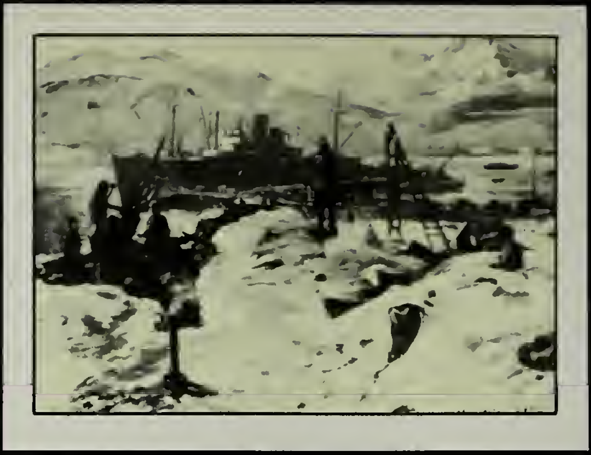
More than 180 artists have contributed to this collection, which was started before World War II by the late Griffith Bailey Coale. A widely acclaimed muralist and expert on small boats and ship models, Coale was commissioned a lieutenant commander and assigned to chronicle on canvas the Navy's role on the seas of a world in turmoil.

Coale's first assignment was on board a Navy warship escorting convoys through the North Atlantic in the months before the United States officially entered the war. While en route to Iceland, on 29 Oct 1941, he witnessed and, later, painted the sinking of an American destroyer, *Reuben James*, by a German submarine. Less than two months later, he was rushed to Pearl Harbor to paint his impressions of the aftermath of the "Day of Infamy."

Coale foresaw the value of a combat art program and recommended that it be expanded to include other trained artists already serving in the Navy in other assignments. Accordingly, three lieutenants—William F. Draper, Dwight C. Shepler and Albert K. Murray—and a lieutenant (jg)—Mitchell Jamieson—were added.

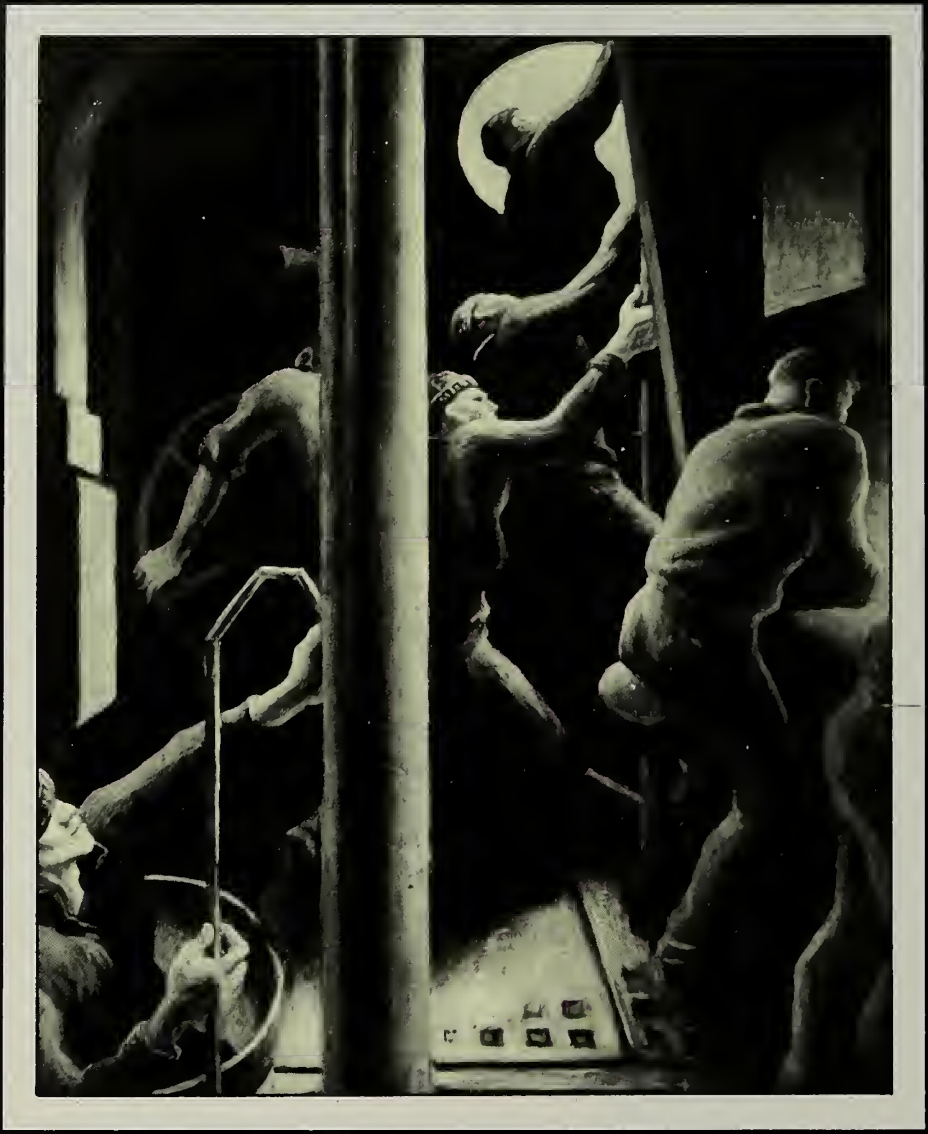
Vint E. Eden, Boatswain's Mate Second—Albert K. Murray.

NAVY COMBAT ART

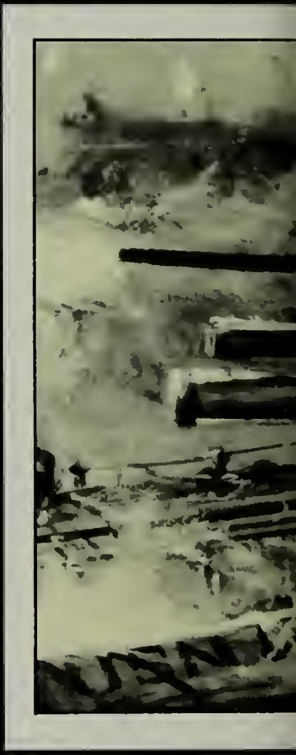


The Eve of Departure—William F. Draper.

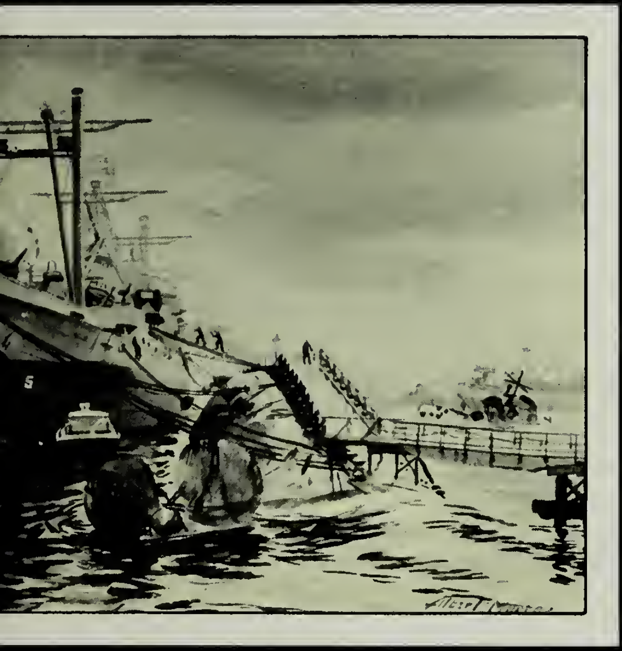
U. S. Flagship of the



Up the Hatch—Thomas Hart Benton.



Firefight—Swift on Soi-Rap—



erranean Command—Albert K. Murray.

Throughout the war, they, and others, scattered to all parts of both theaters and recorded in oils, watercolors, charcoal and chalk the emotions of a world at war. Their renderings, unrestricted by literal limitations of photography, added new dimension to photographic reports of the war; truths that even the camera couldn't see.

Combat artists' works differ from those created in earlier times in one important manner; the artists were not aiming to recreate a specific battle or glorify a specific event. Instead, they had freedom to select scenes that struck them as significant or worthy of artistic notice. Their works do not concentrate on actions of the mighty, but rather on day-to-day activities of the common man, as well as ships, planes and machinery performing prosaic tasks. The combat artists were part of these scenes, living aboard the heaving destroyers and landing on the strife-torn beaches.

Uniformed artists have contributed many of the major works in the collection, but most acquisitions since 1960 have come from civilian artists through the Navy Art Cooperation and Liaison Committee Program (NACAL). This program is coordinated on the East Coast by the Salmagundi Club of New York City, an organization of professional artists and patrons, and on the West Coast by the Municipal Art Department of the city of Los Angeles.

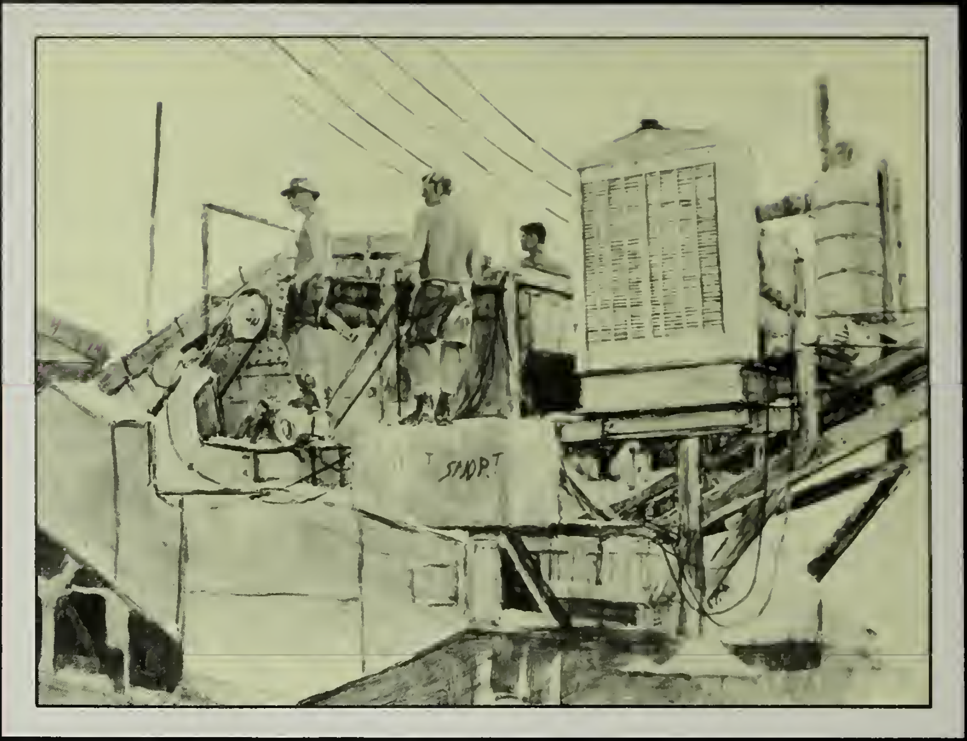
Under this program, artists may contribute to the collection, with or without special assignment. Civilian artists under NACAL auspices have visited the far corners of the world to portray the Navy on land, on sea, under the sea, in the skies and in outer space.

The blaze of battle, the glory of ships of the line, the frenzy of color and motion of the deck of a carri-

Steel.

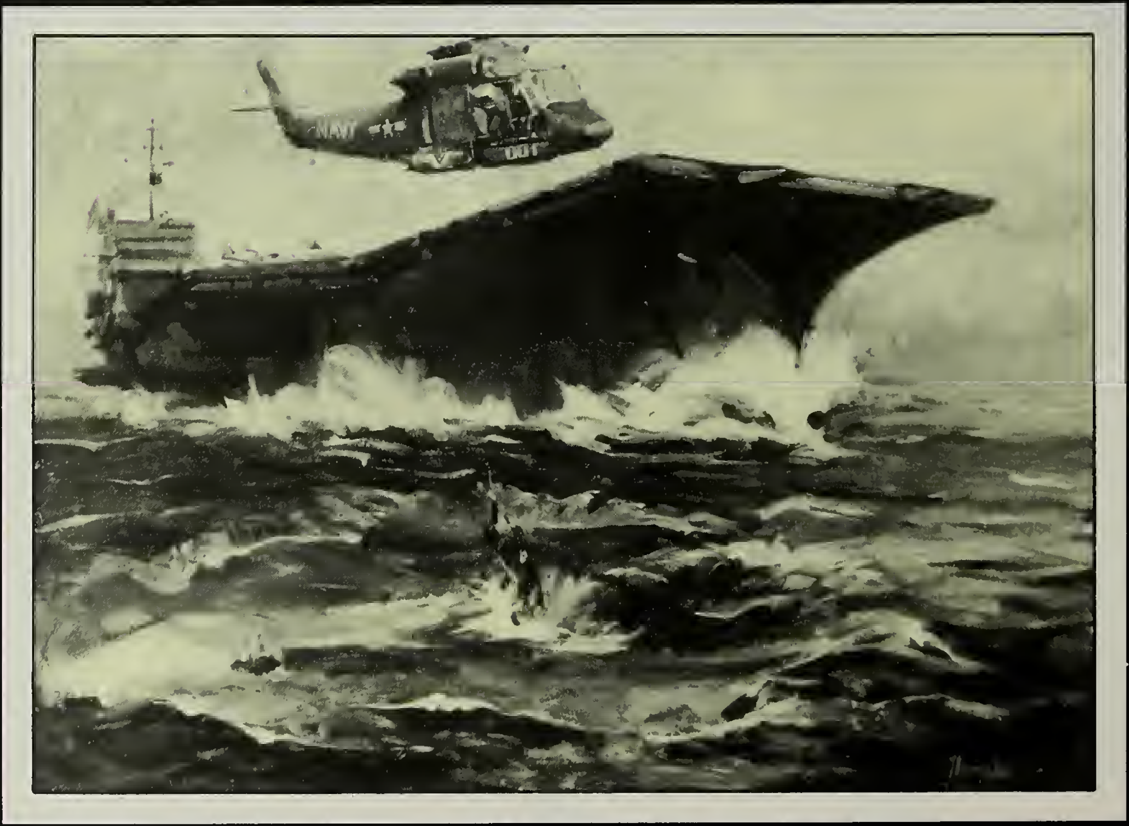
Mercy Ship—Joseph Hirsch.

NAVY COMBAT ART



Short Snort, the Rock Crusher—John C. Roach.

Sea Sprite Pilot Rescue—Gerald Merfeld.



er— these are natural subjects for the artist's eye. But the artist finds beauty, too, in the flamingo-like patterns of cranes and booms in a shipyard or in the crisp equipment tracks across lonely Antarctic snow. He portrays the joys of liberty in the Mediterranean and the loneliness of a submarine watch in the Pacific. And always there is the touch that reminds the viewer that this is not just a rendition based on hearsay, but that the artist experienced the picture.

Each artist depicts a scene in his own way. The styles represented in the collection range from graphic realism to semiabstract impressionism. Climate or the circumstances of combat have dictated the medium in some instances: Water colors would freeze during Navy operations in some parts of the world, and oils may not be practicable with bullets flying overhead; pencil, crayon or ink might have to do. Quick sketches, notes, and memory may be all the artist had with which to work in some cases while, in others, he may have had the luxury of leisure and willing subjects.

Since the end of World War II, parts of the collection have been on almost constant display, either in Washington, D. C., or in exhibits that have toured the country and been shown in overseas cities. Last year, Secretary of the Navy J. William Middendorf II sponsored an exhibit with some 190 of his own selections. In 1967, the collection moved to its present permanent headquarters at the U. S. Navy Combat Art Gallery, Building 67, Navy Yard, Washington, D. C. The works on display are changed periodically. The gallery is open to the public Monday through Saturday year 'round.

Those desiring full color prints of selected paintings may purchase them through the Navy Publications and Printing Service Office, Building 4, Section D, 700 Robbins Ave., Philadelphia, Pa. 19111.

—Story by LCDR M. D. Wozniak, USNR-R

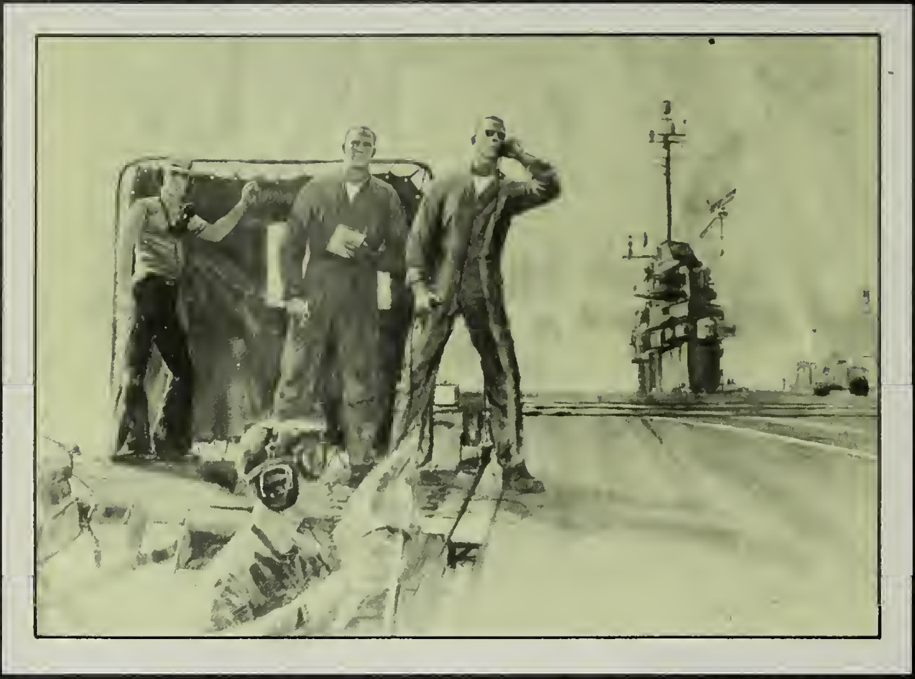
For the Want of a Nail—Robert G. Smith.

nset Launch—John Steel.

NAVY COMBAT ART

Left: Flight Deck Launch—John C. Roach. Below: Checking Out USS George Washington Carver at Charleston, S. C.—Elton C. Fax.

LSO Directs Students Aboard USS Lexington—Maxine McCaffrey.



RADM Samuel L. Gravely—Hughie Lee-Smith.

The Destroyer Man—Walter Brightwell.

Left: Prop Shop—Maurice Silber. Below: Over the Side—John C. Roach.

USS Agerholm at Berth in Japan—John C. Roach.

from the desk of the Master Chief Petty Officer of the Navy

MCPON Robert J. Walker

Our Number One Goal

Since 1972 our Navy has strived to acquire, retain, and utilize an "all-volunteer force."

To accomplish this goal, Navy authorities implemented many policies and programs aimed at attracting recruits and retaining experienced petty officers. Noteworthy changes included a reduction in the tempo of "at sea" operations, guaranteed sea-to-shore tours and, most important, shortened sea tours, as well as increased shore tours for some not-so-critical ratings.

In addition, personnel programs were implemented to enhance service living, not only for recruits, but also for those already in the fleet. These included equal opportunity, human resource management, BEQ management, changes in grooming regulations, drug and alcohol rehabilitation, etc.

While each of these programs has contributed to the progress and updating of life in the Navy, our top-level planners recognize that an additional emphasis is required to enable the Navy to accomplish its mission and meet its commitments.

Accordingly, the Chief of Naval Operations, Admiral James L. Holloway III, has established Fleet Readiness as our number one goal. This does not mean that the Navy will be eliminating or downplaying any personnel programs that are aimed at making life in the Navy better for all hands. But every program will be reviewed in the light of its ultimate impact on fleet readiness. We must keep things in perspective. If a program or a policy does not contribute to overall preparedness of the fleet, we must seriously question its value to the Navy.

In a nutshell, Fleet Readiness calls for maintenance of a strong naval force in support of national policy. More specifically, improved Fleet Readiness can be gained by 100 per cent manning of the fleet sea components.

To ensure that the fleet is manned at 100 per cent and at the direction of the Chief of Naval Operations, the Chief of Naval Personnel implemented the Fleet Readiness Improvement Program (FRIP) in August of this year.

Starting this month, a number of petty officers will receive sea duty orders or will be extended at sea in an effort to elevate fleet quantitative manning to 100 per cent by mid-1976. As of June 1975 there were about 20,000 overtoured personnel ashore. While these personnel were ashore for valid management reasons, not having them at sea impaired fleet readiness.

By selectively extending some sea tour lengths currently shorter than five years and decreasing certain shore tours now exceeding two years, additional petty officers are being returned to or will remain at sea. Some of these personnel may be tasked to perform general duties to allow personnel in undermanned ratings to work exclusively in their specialties.

The Assistant Chief of Naval Personnel for Enlisted Development and Distribution (Pers-5) told a recent Master Chief Petty Officer of the Fleet/Force Conference that the across-the-board effect of FRIP on PRDs will be minimal. Detailers have been instructed to ensure that "at sea" requirements are filled first consistent with certain critical recruiting and recruit training requirements ashore. Thus, we will soon have significantly more Navy personnel doing what Navy personnel do best—serving at sea.

More men at sea will also afford many petty officers the opportunity to sharpen and demonstrate their expertise as noncomissioned officers. This will not only benefit the man (especially at advancement time), but it will also benefit the entire Navy.

Better trained enlisted personnel and more leadership at sea will mean a better run engineroom a more alert combat information center, an overall improvement in shipboard operations, and an increasingly more efficient Navy. Thus, the end product of FRIP will be the realization that we are moving toward attainment of our number one goal—fleet readiness.

Gift of Logbooks Recalls Days of Great White Fleet

Two naval documents of historical significance were recently donated to the Navy by the man who has safeguarded them 56 years, since the era of the Great White Fleet. "I am now 74 years old," said Alfred C. Crooks, former USS *Missouri* (BB 11) seaman, "and I feel strongly that these log books should go to the Navy Department in Washington, D. C., for all interested parties to see."

With those words, Crooks presented Commander D. G. Schuster, executive officer of Naval Support Activity Seattle, Wash., two of *Missouri's* log books.

Crooks had been stationed aboard the 3rd *Missouri* when she was decommissioned in 1919 and had seen the log books stored in a box for disposal.

He asked the chief quartermaster in charge if he could have two of the records as souvenirs. The ones he received were December 1903—the first month the battleship was in service—and December 1908—the log covering the period five months after she had weighed anchor with the "Great White Fleet."

Following the ceremony which took place aboard the mothballed World War II *Missouri* (BB 63) located in Bremerton, Wash., the party adjourned to the Bremerton Naval Shipyard Officers' Club where Crooks recited and read some excerpts from the logs. Some of the more interesting entries accurately depicted life aboard a battleship in the early 1900s.

One entry listed some supplies taken aboard: "19 one-half sheets of 'usuderian' packing, 5 lbs. of ground glass, 600 lbs. of ice, 313 cakes, 5 bales of bathing trunks, 27 slop jars, 2200 rolls of toilet paper, 7800 lbs. of saltwater soap, 25 barrels of beans, 500 lbs. of spuds, 12 gallons of oysters, 5 kegs of mackerel, 20 boxes of coffee, 9500 lbs. of steel and manila hawsers, 4" and 9"."

Twenty-one days after the ship's commissioning, the log book reflected this cryptic observation: "1st sign of litterbugs." On the same day a board of inspectors condemned 400 lbs. of sausage, five gallons of peas and one can of lard. Both logs reflected the difficulties involved in storing foods before the days of refrigeration.

Another entry stated: "Coal passer showing signs of insanity; placed in brig for safekeeping." On 28 Dec 1908 the ship held an auction of deserters' effects and realized $82.45 for the treasury.

Some of the more humorous entries listed penalties for violations of regulations: "Throwing rubbish from bridge—8 hours extra duty" . . . "Bringing pet goat aboard—8 hours extra duty" . . . "Falsehood—24 hours extra duty" . . . "Having shoes belonging to another—summary court-martial" . . . "Smoking in washroom—7 days extra duty."

The logs, which are in remarkably excellent condition, will be forwarded to the Curator of the Navy who is expected to place them in the Naval Historical Library for use by serious researchers and naval writers in years to come.

— Ely U. Orias

Below: CDR D. G. Schuster (right), XO of NSA, Seattle, accepts two Missouri (BB 11) logbooks from Mr. Alfred C. Crooks. Below right: A historical photo of the "Great White Fleet," of which BB 11 was a part, shows the fleet leaving San Francisco on its 1907-1909 world cruise.

• NAVY REVIEWS EQUAL OPPORTUNITY PROGRAM

The Chief of Naval Operations, Admiral James L. Holloway III, has announced the establishment of a Navy Affirmative Action Planning Task Force "to conduct an in-depth review of the present status of equal opportunity in the Navy and to determine those changes necessary to achieve full equal opportunity for all personnel." The task force will make a comprehensive review of established programs and policies, identify areas for improvement and develop a Navy Affirmative Action Program which establishes the goals and outlines the actions required to increase the effectiveness of equal opportunity programs Navy-wide. In establishing the task force, Admiral Holloway stressed that he wants to get the Navy as an institution involved in equal opportunity to the point where it will become self-sustaining within the chain of command. "To make this work," he said, "each individual in the chain of command is accountable for insuring that the Navy progresses toward the goal of equal opportunity. Success depends upon vigorous support at all levels of command and by each person in the Navy."

Rear Admiral Paul C. Gibbons, Jr., Commander Training Command, Atlantic, in Norfolk, Va., will serve as Director of the task force. Admiral Gibbons has served as commanding officer of the Human Resource Management Center in San Diego and has extensive background in Navy equal opportunity and race relations programs. The task force will include representatives of the Commanders in Chief of the Pacific and Atlantic Fleets, the Chief of Naval Personnel, the Chief of Naval Education and Training, the Office of the Chief of Naval Operations, the Chief of Naval Material, the Bureau of Medicine and Surgery and the Chief of Information.

• FIVE-YEAR OBLIGATION SET FOR SEVERAL RATINGS

The period of obligated service for conversion or entry into several ratings was recently extended. Personnel who want to enter the DP, JO, BU, CE, CM, EA, EO, SW, UT, PH and DT ratings through class "A" school must now agree to a total of five years' obligated service. Beginning with the August 1976 advancement exam, those wanting to advance to E-4 or be designated a striker in one of these ratings must acquire sufficient obligated service which will aggregate a total of five years' duty. This obligation is for advancement only, not for eligibility to take the exam. Details may be found in BuPers Notice 1133 of 8 Nov 1975.

• CALL FOR RECRUITING DUTY VOLUNTEERS IN 16 DISTRICTS

Volunteers are urgently needed for recruiting duty in 16 of the Navy's 43 recruiting districts. Top-performing career petty officers who are eligible for shore duty may fill the billets and earn up to $150 per month special duty assignment pay, and have the satisfaction of achieving tough goals and an opportunity to be their own boss.

Immediate assignments are available for the following districts: Detroit, Chicago, St. Louis, the District of Columbia, Newark, Philadelphia, Boston, Harrisburg, New York, Louisville, Los Angeles, San Antonio, Dallas, Houston, Oklahoma City, and Columbus. In most cases, further assignment will be made to a recruiting station within the assigned district.

In addition, minority recruiters are needed in the following groups and districts: Black-- Buffalo, Albany, Boston, Miami, Raleigh, Indianapolis, Dallas, San Francisco, Harrisburg, Oklahoma City and San Diego. American Indian-- Kansas City, Oklahoma City, Albuquerque, San Diego and San Francisco. Mexican American-- Kansas City and Los Angeles. Puerto Rican-- Newark, Albany and Philadelphia.

Requests for recruiting assignments should be submitted to ChNavPers (Pers-5021) via the chain of command. Individuals interested in volunteering for this duty should check with the Enlisted Transfer Manual to ensure that they meet qualifications.

• NEW QUALS SET FOR COMMAND OF SURFACE SHIPS

Surface Warfare officers hoping to achieve "Qualified for Command of Surface Ships" designation must meet new qualifications recently set forth in OpNav Instruction 1412.3. In order to qualify, 111X officers must now be designated as a Surface Warfare Officer; have 48 months in a ship or staff afloat command; have 12 months in the ship from which the application is made as a lieutenant (department head or XO), lieutenant commander or commander; satisfactorily complete a written professional examination; demonstrate ship-handling ability; qualify as EOOW, in addition to OOD and CICWO; and possess "command qualities," including professional competence, leadership, endurance, personal and ethical character.

Beginning in FY 78, surface warfare officers formally screened by the Commander Command Selection Board will be ordered to command only if the designation "qualified for command" has been achieved. An exception will be made for those officers (O-3 and above) who have not served at least 18 months aboard a surface ship subsequent to October 1975.

• REVISIONS MADE TO COLLEGE DEGREE PROGRAM FOR OFFICERS

The College Degree Program provides an opportunity for selected officers to earn baccalaureate degrees through full-time study of up to 24 months at civilian colleges and universities. The purpose of the program is to meet Navy requirements for augmentation, postgraduate selection, Naval War College admission, and utilization in certain subspecialties. Chief of Naval Education and Training Instruction 1520.4A was recently distributed to all ships and stations, providing information on this program. This new edition of the instruction contains several important changes, particularly the requirement to study in certain service-related fields and to contact a Navy Campus for Achievement (NCFA) Educational Advisor for counseling. The next deadline for College Degree Program applications to reach Pensacola, Fla., (Code N-133) is 1 Feb 1976, for consideration by the 23 May 1976 selection board.

• PILOT PROGRAM ON "SEA POINTS" FOR ADVANCEMENT IS TERMINATED.

The "sea points" pilot program has been completed with a decision not to implement the program because it would not have the effect of increasing advancement opportunities for personnel based on service at sea. The concept upon which the program was based was that additional final multiple advancement points (sea points) would be given for time at sea.

According to NavOp 146/75, comprehensive analysis of a study made during the February 1975 E-4/5/6 exams indicated sea points would provide little benefit for a number of reasons:

- Members who were eligible for sea points from the February exam did better on exam scores, and had higher than average performance and experience factors, than their peers who were not eligible for sea points. Since these members were already at the top of their ratings and enjoying a better than four per cent selection advantage over their non-seagoing peers, sea points did not increase their advancement opportunity.
- The advancement opportunity for women was not significantly changed.
- Increasing the contribution of sea points beyond the proposed seven per cent of the final multiple unduly distorted the balance of the final multiple factors of exam, performance and experience.

The message also said that a continuing effort will be made to formulate effective programs for rewarding members on sea duty, including current efforts to increase sea pay.

• REVISIONS MADE TO WOMEN'S RATING CONTROL LIST

A revised list showing which ratings are open to women, and which are "controlled" was recently published by BuPers. The mess management specialist and electrician's mate ratings are now open to women through on-the-job training. Four previously open ratings have been reclassified as controlled. They are dental technician, engineman, hull maintenance technician and yeoman.

According to the new list, 35 ratings are now open to women without restriction through on-the-job training while access to 44 ratings is controlled. Fifteen seagoing ratings remain completely closed. Factors considered in the periodic review and update of the rating control list are billet structure, manning levels and sea/shore rotation cycles. Full details are contained in BuPers Instruction 1410.4A.

• ANNUAL ALIEN ADDRESS REPORTS DUE IN JANUARY

All aliens who have been issued an alien registration card and are in the United States or one of its possessions must report their address during January, even though the address may be the same as last year. Address reports must be filed on official forms which are obtainable at any U. S. post office and should be returned to any U. S. post office when completed.

If an alien is absent from the U. S. during January and a report has not been filed, one must be submitted at the time of reentry. There are severe penalties for failure to comply with this law, including fine, imprisonment or deportation.

• F-14 SQUADRON NAMED NAVY'S TOP FIGHTER UNIT

The honor of being named the Navy's outstanding fighter squadron recently went to Fighter Squadron 32, which won the Admiral Joseph Clifton Award. The award recognizes meritorious achievement by a fighter squadron. During FY 75, VF-32 had the highest admin material inspection grades ever awarded by Fighter Wing One. Their 69-month accident-free period at the end of the fiscal year was the longest ever recorded for a carrier-based fleet fighter squadron. VF 32's retention rates were 82 per cent for first-termers and 100 per cent for career personnel.

- VT-26 WINS TOWERS SAFETY AWARD

Training Squadron 26, NAS Chase Field, Tex., was presented the Admiral John H. Towers Safety Award. The award, named for the third naval officer to be designated a naval aviator, is given each year to the training squadron achieving an outstanding record in its mission-oriented flight safety program. It is sponsored by the Daedalian Foundation, a nonprofit organization created to promote interest in air and space, encourage flight safety and provide scholarship assistance in aviation career fields.

- CONSTRUCTION BATTALION 4 WINS PELTIER AWARD

Naval Mobile Construction Battalion Four was named the Navy's most outstanding Seabee unit for FY 75 when it received the Peltier Award from the Society of American Military Engineers. The unit was recognized for its "sustained, superior, professional and military proficiency" during deployment to Guam. A major factor in the Society's decision was NMCB-4's participation in Operation New Life, the evacuation of South Vietnamese refugees. This is the battalion's second major recognition this year.

- NAVY CAMPUS FOR ACHIEVEMENT CONTINUES TO GROW

Four more colleges were added to the list of educational institutions participating in the Navy Campus for Achievement (NCFA) College Degree and Certificate Component Programs. They are: Florida Junior College, Jacksonville; Trident Technical College, Charleston, S. C., Meridian Junior College, Meridian, Miss., and Gavilan College, Gilroy, Calif. This brings the number of participating schools to 16. NCFA member schools waive residency requirements and accept up to 75 per cent of nontraditional credits (credits earned through service schools, CLEP examinations, correspondence courses and other self-study programs). They may also credit military on-the-job experience.

- BOOST APPLICATION DEADLINE ANNOUNCED BY RECRUITING COMMAND

Navy enlisted personnel interested in the Broadened Opportunity for Officer Selection and Training Program (BOOST) still heve time to submit applications to the Navy Recruiting Command before the 15 Feb. 1976 deadline. BOOST selectees will begin college preparatory training in April 1976 at the Service Schools Command, San Diego. BOOST gives enlisted men and women an opportunity to correct deficiencies in communications skills, mathematics and science. Upon successful completion of the school, selected personnel may compete for entry into the U. S. Naval Academy, NROTC, NESEP or NEDEP. For quals see BuPers Manual 1020360.

ATC Maintenance School

Top: A surveyor checks his sights on the $4.5 million ATC building at NATTC Memphis, Tenn. Above: Master Chief Electronics Technician Hightower briefs an incoming Air Force student on what to expect from the curriculum.

The Radar Air Traffic Control Center (RATCC) branch of Air Traffic Control Maintenance School, Millington, Tenn., is turning out not only topnotch Navy electronics technicians, but Air Force, Marine and civilian repairmen as well. A total of four courses, ranging in length from five days to 11 weeks, enable students to receive a well-rounded approach to radar operation, circuitry and related maintenance.

Despite fluctuating student input and a highly technical curriculum, the attrition rate is extremely low. Master Chief Electronics Technician Olen Hightower, the school's leading chief, explained why: "We have a very low student-to-instructor ratio and that, coupled with the E-5 and above entrance prerequisite, makes for an excellent classroom environment. Troubleshooting, alignment and repair lab exercises are taught on equipment identical to that used in the field."

The majority of Air Force personnel report from Tinker AFB, Oklahoma City, Okla. Navy and Marine Corps students check in from duty stations around the globe, while civilian classmates join them from civil service work centers. The common bond is electronics and there is practically no room for mistakes after the trainee starts practicing what he has learned.

In just about all cases, the student has requested RATCC training. Upon successful completion, graduates transfer to naval air stations, Air Force bases and civil service positions throughout the country.

Meanwhile, construction of the school's new multimillion-dollar training facility nears completion. This building will provide the most modern facilities available for conducting RATCC training, as well as space for air control operator and carrier air traffic control training. Regardless of future prospects, the ATC Maintenance School will certainly continue to grow as new ATC systems are developed.

—Story by JO1 John Masters
—Photos by Richard Ramsey

Educational Advisor

Services available through the Navy Campus for Achievement Program (NCFA) were recently expanded when professional educational advisors were assigned to Regional NCFA Centers in San Diego, Norfolk and Pensacola. Through their academic backgrounds and experience in counseling military personnel, NCFA Educational Advisors, who are civil service employees and educators, bring to the job the expertise necessary to understand the problems encountered by Navy personnel who want to further their education while on active duty.

In the past, Navy men and women seeking an education did so mostly through their own efforts, often with little or no guidance. Now with help from these counselors, they can select realistic goals, plan a program compatible with their own capabilities, aptitudes and interests, and select the appropriate educational institution for achieving their goals in the shortest possible time.

The NCFA Educational Advisors are familiar with all aspects of on-duty and off-duty education and training offered by the Navy, and can assist in applying for Navy Tuition Aid and in making application to use the GI Bill educational benefits. They can evaluate Navy training and service schools for possible college credit, and can provide guidance in meeting academic requirements for Navy on-duty education programs such as NESEP. The NCFA Educational Advisors put it all together for you, making sure that you get maximum Navy assistance in attaining your goal, whatever it may be.

In addition to providing a personal counseling service to individuals, the NCFA Educational Counselor renders valuable technical assistance to Navy commands. He can assist commands in: conducting surveys to determine educational levels and needs of command personnel; selecting educational institutions that are most appropriate in meeting command needs; monitoring on-base educational programs to ensure that the institution is providing quality instruction and complying with Navy, state and VA policies, regulations and laws; and coordinating the educational activities of command Educational Services Officers, thereby keeping them advised of current educational opportunities, available resources and changes in educational policies and regulations.

A unique feature of the "new look" in Navy education is the NCFA Contract for Degree. This option provides a means by which Navy personnel can work toward a degree or certificate with a designated NCFA institution regardless of where he/she may be stationed.

All of the colleges participating in the program have agreed to make important exceptions to their regular policies. First, they have agreed to eliminate residency requirements and to permit maximum transfer of credits from other accredited schools. Each NCFA school will also give credit for certain military experiences and tests, such as the College Level Examination Program battery, correspondence courses and Navy service schools.

NCFA Educational Advisors have found that many Navy men and women have already earned or can be awarded many of the credits needed for a college certificate or degree. Navy personnel may acquire up to 75 per cent nontraditional credits toward their degrees and have 10 years to complete the requirements for their certificate or degree with no obligation, during this period, to continue in the program.

The NCFA school and the NCFA Educational Advisors will guide and monitor your progress and keep records of all the credits earned, regardless of where or how you earned them, and when all requirements are met, the NCFA school will award you your certificate or degree. To take advantage of the NCFA contract for degree option, you need to consult with an NCFA Educational Advisor. He will help you to select the most appropriate NCFA school and program according to your own personal situation and goal. The Advisor will also help you to collect and fill out all the required documents for enrollment and will continue to assist you whenever needed after you are enrolled. With guidance and counseling from both the NCFA Educational Advisor and the NCFA school, you can be assured of being on the proper course to your goal. The NCFA Contract for Degree Program literally makes the Navy a worldwide campus.

The NCFA Educational Advisor realizes that not all Navy men and women want an education. However, if you are one who does, the opportunity is here. If an NCFA Educational Advisor has not been assigned to your naval installation, contact your ESO for the address of the nearest NCFA Advisor office.

—Ralph J. Tomlin, Senior NCFA
Educational Advisor, Western Region

Technological Advances in

PASSING THE WORD

From 'Word Processing' to 'Microfiche'

Consider the following: a Bureau of Naval Personnel Manual not much bigger than a standard deck of playing cards; a process of passing printed information over standard telephone lines at the rate of one page every six seconds; a typewriter that—at 300 words per minute—types not only in the normal left-to-right fashion, but also from right to left.

These phenomena, and others, are part of the growing field of "word processing"—a technology that is coming of age for the U. S. Navy.

"Word processing" is a term coined by a major manufacturer of office machinery in the mid-1960s for its own line of equipment. Today, word processing has grown to include many companies and hundreds of types of equipment all designed with one purpose: to communicate the written word as quickly and as efficiently as technology permits.

Until recently, the Navy's part in all of this has been that of an interested observer. Now, a number of factors have combined to launch the Navy on its own program of word processing.

These factors include:

- Technological advances in word processing equipment such as high-speed typewriters, computer links, microfiche and others that make the system practical for specialized Navy work.
- A reduction in personnel Navywide and particularly of clerical personnel at headquarters commands, without a reduction in paperwork.
- The soaring costs of producing and passing the word within the Navy because of higher wages, increased paper, ink and duplicating expenses and increased postal rates.

In an effort to determine just how word processing could be put to work for the Navy the OpNav staff began a study of observing how other government agencies and businesses had put word processing equipment to work and what jobs they could do. Studies by the Library of Congress and the Agriculture Department, among others, evaluated each of the systems available in terms of ease of operation, tasks performed, cost and versatility.

The staff members of the Navy's Word Processing Program concluded that word processing equipment could work—and work well—for the Navy. But putting the infant technology of word processing to work for the Navy meant educating the future Navy users and managers of the equipment. This also meant explaining some of the misconceptions that individuals had developed about "super-typewriters" and the like.

First, was the notion that the introduction of a typewriter capable of typing at 300 words per minute would throw half an existing secretarial pool out of work or mean a cutback in yeoman billets.

"This is the wrong idea about word processing equipment," one staff member said. "First of all, not all typing functions can or should be done using word processing equipment. Repetitive letters, letters that are very long or require coordination with many people, and charts and graphs lend themselves to high-speed word processing equipment. The bulk of Navy typing duties are not like this. They are short letters and the completion of forms.

"Word processing equipment would enable the staff clerical personnel to increase their productivity and therefore better manage the workload. There would not be a cutback in jobs. There would be an increase in the efficiency and productivity of the jobs now being done," he said.

When the Word Processing Program was announced, some believed that all ships and shore activities eventually would have all the equipment installed. But few commands produce over a thousand pages of correspondence a month and therefore would not need the full range of word processing equipment.

There is, however, one piece of word processing equipment on its way to fleet commands, large and small. Soon, all ships will have at least one microfiche reader/printer.

Microfiche is a four-by-six-inch card no thicker than a piece of paper. In spite of its small size, it can contain up to 98 pages of information. Using the reader/printer, someone can look up the information he wants and view it on a screen. Or he can press a button and make a copy for use away from the machine.

This system has a number of advantages particularly suited to shipboard use:

- Publications that once took up entire desk tops can now be placed on microfiche and stored in a fraction of the space.
- The long hours formerly needed to update and change the information in publications, a page-by-page process, would be eliminated. Updating publications on microfiche would simply mean destroying the old microfiche card, which contains the entire publication, and substituting the new microfiche card with a completely updated edition.

One type of word processing equipment that will be installed only at major headquarters and systems commands (those that produce more than 1000 pages of correspondence a month) is the Cathode Ray Tube system (CRT).

Using the CRT—a type of television screen on which the correspondence is displayed—typists not only can see the work as it is typed, but they can make corrections, rearrange words, sentences, paragraphs or entire pages and store the finished product on magnetic tape for later use.

When corrections are made to the correspondence, the typist corrects only the mistake, and does not have to retype the entire piece. When the correspondence is smooth and error-free, the typist punches a button and the copy is transferred to paper at the rate of 300 words per minute.

One yeoman gave an example of how well the CRT works:

"One Friday afternoon, just as I was about to secure for the weekend, an eight-page report came back from the admiral's office with a word or two changed on each page or a comma added or deleted," he said. "Since the report was on tape, I only had to put the right tape in the CRT, find and correct the errors and print out the corrected report. A two-hour typing and proofreading job took five minutes."

The CRT is clearly intended to aid the overburdened typist. Studies have shown that although a good typist may type 60 or 70 words per minute, that rate slows to 10 words per minute by the time rough copy is typed and edited, a smooth is typed and proofread, telephones are answered and the correspondence is prepared for mailing. The CRT, printing at 300 words per minute, averaged with all other factors that take a typist away from the typewriter, equals a real average of about 160 words per minute.

The CRT is fast and takes only minutes to learn to operate. But it is also very expensive. The Word Processing Program staff was able to figure how much work must be done on the machine before it begins to "pay for itself." How much? They found that the CRT, used along with other word processing equipment at a central point, could not only take care of the typing jobs of the major command, but also help meet the requirements of a number of tenant activities.

Another word processing system sends information over telephone lines to a receiver that records at the rate of one page every six seconds. The information, recorded on magnetic tape, is fed into a machine that automatically types out the finished product. Headquarters Navy Recruiting Command in Washington, D. C., currently is able to communicate with its activities in this way. The system can transmit 10 pages in one minute of telephone time, resulting in significantly reduced cost.

Instant communication, high-speed typewriters, CRTs and microfiche make up only a portion of the technology of word processing that the Navy is currently studying. Other special equipment with specialized tasks is under development.

Opposite page: With the touch of a button, up to 15 pages of stored information are typed out in final form at the rate of 300 words per minute. Below: RADM James B. Linder, former Assistant Vice Chief of Naval Operations, examines a piece of equipment currently used by the Word Processing Center at the Pentagon. RADM Linder is currently Commander Carrier Group Four, Norfolk, Va.

EN3 Cathy Russell

'I LIKE WHAT I DO' -and SHE DOES IT WELL

Contrary to general consensus, many women in the Navy don't just sit behind typewriters and pound out Plans for the Day, or pass out aspirin. There are increasing numbers of Navy women who hold down a variety of jobs in fields that are new to them. They are happy about it.

Engineman 3rd Class Cathy Russell is such a woman. She is currently assigned to the boathouse at Naval Air Station, North Island, in San Diego, Calif. There she works alongside the more seasoned "snipes" that comprise most of her rating.

What is it that attracts a 20-year-old woman like Cathy Russell to a job that includes crawling around in the bilge of an LCPL landing craft with grease from head to foot? A prerequisite, of course, is to have an interest in opening up new horizons, to which EN3 Russell readily admits.

"Growing up with four brothers is also a factor," she says. "You have to be able to do many of the same kind of things to survive."

When you couple that attitude with her aptitude for tools and mechanical things, it's only natural that Petty Officer Russell would accept and relish the responsibility of a job repairing and maintaining engines.

Engineman is a relatively new rating for women. Cathy Russell was only the second female to graduate from EN "A" School in Great Lakes, Ill. Her advancement to E-4 was delayed almost four months because the machines, in Washington, could not compute a card punched "F" for female and "EN" for Engineman. Being among the first to do anything different is not always easy.

Being among the first means being watched.

Petty Officer Russell, and other young women like her, understood they must perform as well as their male counterparts. It was felt by some that the engineman rating demanded too much of a woman. Therefore, she is ever conscious that she has something to prove.

She emphasizes that "a great deal of the brute strength is just a matter of leverage. It's also knowing the proper tools and how to use them."

In addition to her gains in knowledge, EN3 Russell has also "gained" 15 pounds. She feels that the additional pounds are necessary to enable her to do the more strenuous work which the engineman rating demands.

Besides being a full-time sailor, Cathy Russell is also a full-time housewife, mother and college student. After a full and physically exhausting day at the boathouse, she returns to her home in Chula Vista, a suburb of San Diego. After dinner and a few minutes with her husband, Bruce, and her seven-month-old son, Joseph, she dashes off to night school at Southwestern College.

Cathy Russell had planned to attend the University of Indiana, which is near her hometown of Monticello, Ind., but funds were unavailable. It was this lack of money and the attraction of the educational opportunities that prompted her to enlist. After four years of Air Force Reserves in high school, she chose the Navy because what it had to offer appealed to her. Taking full advantage of this opportunity, she's currently enrolled in 10 hours of classes this semester.

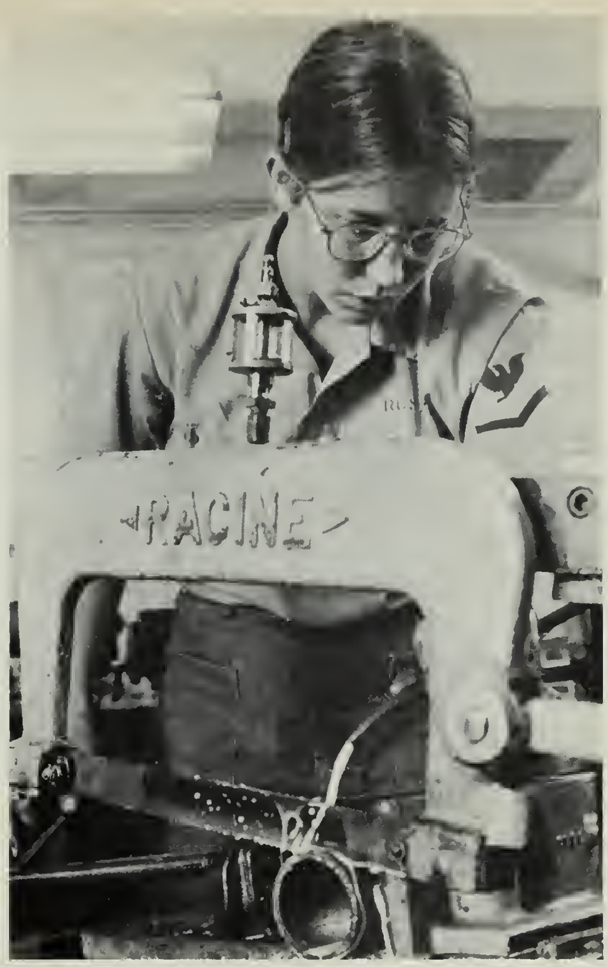
Petty Officer Russell plans to study medicine full time when she is discharged in 1977. Anyone who can develop the capability of replacing a broken saltwater filtration system, she feels, can move ahead in other fields if the interest is there.

How does Cathy Russell feel about women working on engines in the pursuit of a career?

"I have the knowledge and the physical stamina to do the job. Granted, it's a job that a lot of women wouldn't care for, but I like what I do, and I do it well," she emphasized.

"As for the grime, well, that's what soap and water's for, isn't it!"

—Story and photos by PHAN Jo Cooper



Facing page: Engineman 3rd Class Cathy Russell makes a daily maintenance check. Above: Slicing off a section of pipe for a "homemade" engine part, Cathy uses materials on hand. Below: EN3 Russell applies the tools of her trade with care and precision.

PROFILES OF THE FLEET

ETCS Hugh Scriven

.....AL

A crewman aboard the destroyer tender USS *Samuel Gompers*, Instrumentman 3rd Class Robert Lyons, has a lot of time on his hands—and it keeps him busy. He performs a major portion of all timepiece repairs.

Lyons helps repair about 25 clocks a week, ranging from delicate "comparing" watches—used by quartermasters for setting the ship's clocks—to rugged deck clocks especially designed to resist rust and corrosion. He doesn't, however, repair chronometers or divers' watches.

"Sometimes we have problems repairing old clocks," said Lyons. "If a clock is very old, we may have to manufacture parts for it," he added. That could mean using a mini-lathe to make a three-sixteenths-inch pin to hold a clock's timing wheel in place.

A year ago, Lyons worked as a guided missile technician. That, he admits, was a lot different from his present job where he uses tweezers and screwdrivers no bigger than toothpicks. "It's a different world," said Lyons, "but both ratings require a steady hand."

Gompers serves Seventh Fleet destroyers and cruisers in the Pacific. When in port, the ship operates 46 shops with services ranging from boiler to watch repair. Most requests for watch repair come from destroyers, but it isn't unusual for Lyons to get as many as 30 broken clocks from an aircraft carrier.

That keeps Lyons busy in his world of tiny wheels, springs and screws. With its green bulkheads, the small watch repair shop sports a large assortment of repaired clocks, all ticking a barely audible cadence.

Top and above: IM3 Robert Lyons at his workbench aboard USS Samuel Gompers. Facing page top: Senior Chief Scriven carefully scrapes a varnish coating from an electronic component. Far right: ETCS Hugh Scriven demonstrates a soldering technique.

IM3 Robert Lyons

Hands At Work

Soldering miniature electronic components under a magnifying glass requires not only a steady hand but also considerable technical skill. Senior Chief Electronics Technician Hugh Scriven of Mobile Technical Unit Seven (MOTU-7) has the job of training others to develop this skill.

A graduate of a specialized school for repairing miniature components, Senior Chief Scriven instructs students of MOTU 7's "practical miniature component repair" held at Yokosuka, Japan. This course teaches students how to solder circuit board connections so they will meet government specifications.

Since last January, 60 people have had instruction under Senior Chief Scriven. During the short, four-day course, students from Seventh Fleet ships and other units deployed in the Western Pacific learn how to solder and disconnect circuit board wiring, how to analyze solder connections for discrepancies and how to replace circuit boards in equipment.

His course also prepares students for the formal school in "miniature component repair" which is taught at many stateside naval air stations. "This is not a substitute for formal training," Senior Chief Scriven said, "but a class in techniques and details many men did not learn during their 'A' school training period."

Senior Chief Scriven instructs just one of 30 courses taught by professionals at MOTU-7. The 20 military and seven civilian instructors have accumulated a total of 539 years of experience.

MOTU-7 staff members not only teach in classrooms, but often go to sea to train students in their working spaces with equipment the students must maintain routinely.

—Story & photos by JO2 Dennis Fields, USN

PROFILES OF THE FLEET

Chaplain Lowell Van Tassel

Circuit Riding

Ask any Navy chaplain what "circuit riding" is all about and he'll glady tell you what it takes to bring the Word to Navymen at sea—a lot of highlining and helo riding from one ship to another is involved. On shore—at places like the Naval Air Station, Pensacola, Fla.—there are a lot of outlying fields and a chaplain again finds himself riding the circuit in order to see the "troops" and help them with their problems. One such Pensacola circuit rider is Chaplain (Commander) Lowell W. Van Tassel.

Chaplain Van Tassel has a temporary office in the hangar of Training Squadron 10 (VT 10) at Sherman Field. Chances are, you won't find him in his office outside of designated periods. He's usually on the go, walking around on the flight line, or talking to Navy people in the shops or in the control tower.

"As a chaplain," he says, "you must be approachable and available at all times. This means going where the people are."

Would you believe that the chaplain has a pair of naval aviator's wings pinned to his blouse? At first glance he looks like a senior pilot, and that's understandable—Chaplain Van Tassel spent 15 years as an aviator before leaving the Navy—temporarily. He enrolled in a theological school, and when that was completed, again chose to serve in the Navy.

When asked what type of aircraft he flew as a Navy pilot, he smiles and says, "Just go down to the Naval Aviation Museum; they're all there." (He owns and flies a *Piper Arrow*.)

Now back on duty as a chaplain he spends his time taking care of people's spiritual needs and listening to their problems, both large and small. Either as a "listening post" or just a friend, he counsels and helps guide Navy men and women through periods of stress, and he's on hand to share their joys as well.

Chaplain Van Tassel understands only too well the importance of personal well-being. He knows also that helping people is first and foremost the job of a chaplain.

Although Chaplain Van Tassel spends a lot of time out of his office, he is not out of contact with those who need him there. Moving around the flight line and shops at Sherman Field he is always in contact with the NAS Pensacola chaplain's office by means of a "bleeper" signaling device he carries on his belt.

On call 24 hours a day, Chaplain Van Tassel also ministers to the "Night Navy," those who work when the rest of the station personnel go home. Night or day, the chaplain of the line maintains the same routine—a visit to the flight line, a chat with the men and women in the control tower or a cup of coffee in one of the many shops. He's always around "showing the flag."

—Story by PH2 J. M. Dale
—Photos by PHAN T. Lee Kidwell

AC2
Linda Stewart

Jumping With Parachute Team West

When she's not flying a plane, going scuba diving, or practicing her tennis and karate, Linda Stewart is jumping from airplanes. A member of Navy Parachute Team West, Linda recently completed her 1051st jump in Spokane, Wash., where the team put on an exhibition.

A San Diego native, she is currently the only woman on a U. S. military parachute team (see ALL HANDS, Nov. '74, about an earlier woman member of the same team).

A 10-year veteran of the sport, Linda began parachute jumping in the Army, switched to the Navy two years ago, and has been on Team West for the past four months.

"Getting on the team wasn't the easiest thing in the world," she said. "There still seemed to be a question in some minds as to whether a woman could handle the job."

Others, however, felt she had the credentials. "Most team members have between 500 and 1000 jumps," said Senior Chief Tom Norton, a team member. "Linda has been involved in the sport longer than any other member and has a slight edge on the number of jumps."

An air controlman 2nd class, she worked in the control tower at the North Island Naval Air Station before coming to the team. She had set her sights on 500 jumps a year but it looks as though she'll have to settle for about 200. Meantime, she has four other sports to occupy her time.

—Story and photos by PH1 J. A. Davidson

Opposite page: Chaplain Van Tassel visits people where they work, establishing solid communications link. Top left: Making her 1051st jump, Linda zeroes in on target. Left: Air Controlman 2nd Class Linda Stewart, the only woman currently on a military parachute team.

Above: HM1 Don Lowery brings Dr. Murphy some clinical data on a student. Below: Physician's Assistant Don Lowery at the Whiting Field Dispensary.

CLINICAL CA

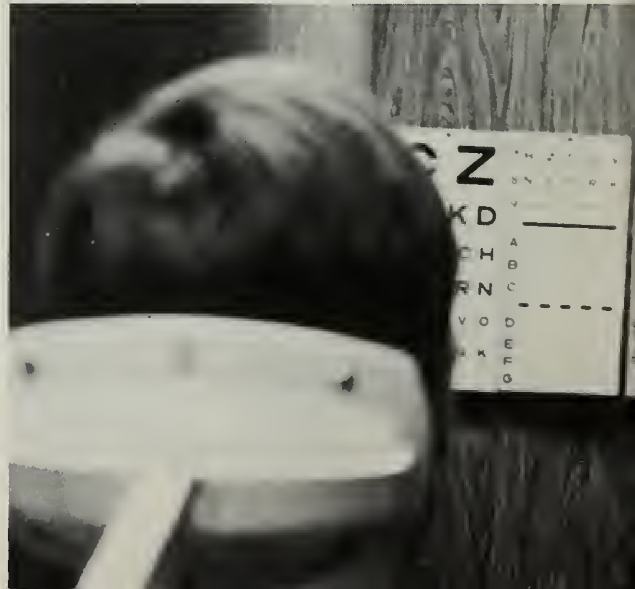
What is being done in the Navy to offset the shortage of doctors? Navywide, there are financial incentives and impressive programs designed to recruit and retain physicians. Additionally, some individual commands are doing what they can to ease physicians' workloads by providing further training for hospital corpsmen.

The Naval Aerospace and Regional Medical Center, Pensacola, Fla., is one such command. Its Clinical Care Trainee Program is an informal, command-sponsored endeavor.

One participant, Hospital Corpsman 1st Class Don Lowery, is learning to handle many of the routine and time-consuming tasks which prevent physicians from spending time with more vital medical procedures. Although he doesn't possess all the skills or knowledge of a trained physician, Lowery works with Lieutenant Commander James G. Murphy, KC, as a clinical trainee. LCDR Murphy screens Lowery's work and provides him with elementary training in diagnosing illnesses and treating patients.

The Pensacola program includes classes which are held every Thursday for the first three months and then every other Friday for a period of eight months. It is a demanding course—of the 22 students who began with Lowery, only five remained at the end.

A typical day for Lowery starts with sick call at the NAS Whiting Field dispensary. A patient comes to the office with a sore throat and a cold. Lowery prepares a case history and writes any pertinent clinical data in the patient's sick call record. After a throat culture is taken to ensure the ailment isn't strep throat, he prepares a prescription for the patient—a trainee can prepare



RE TRAINEE

prescriptions for "across-the-counter" drugs such as aspirin, cough syrup and the like. All prescriptions are approved by a physician.

Lowery's next patient is a pilot with sinus trouble who is scheduled for an afternoon flight. He examines the pilot and issues a 48-hour "grounding notice." He may extend the grounding for another 48 hours if necessary; the pilot must be seen by a flight surgeon before being returned to flight status.

Several routine examinations round out the morning. Lowery handles these, freeing LCDR Murphy to examine and treat patients in need of his skills.

The flow of patients slows around 1000, allowing Lowery a moment to relax—it doesn't last long. In five minutes, Dr. Douglas E. Claybrook, another flight surgeon, asks Lowery to assist in the emergency room. A child has swallowed an undetermined amount of airplane glue. All works well; the little girl is out of the dispensary and on her way home in about 30 minutes.

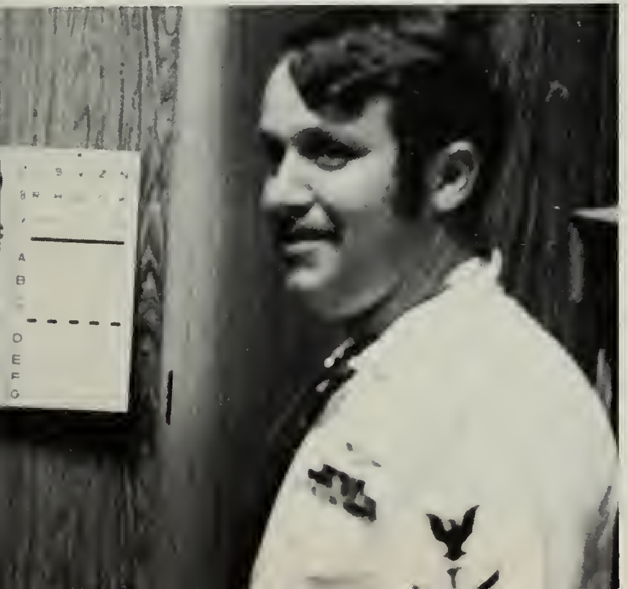
Lowery then downs a quick lunch in order to get back to his office for some extra study.

The afternoon is a continuation of the morning routine. He takes histories and assists Dr. Murphy who, in turn, keeps a watchful eye on his trainee's technique.

Being a clinical care trainee is not easy, even for a 1st class hospital corpsman. The title carries with it a great deal of responsibility and requires constant study outside of class. Lowery, however, believes it is worth every minute of his time and his wholehearted effort.

—Story and photos by PH2 Stephen Butalla

Above: HM1 Lowery checks on a blood test at the dispensary lab. Below: Don gives a routine examination to a flight student. Bottom: It's not unusual for Don to give an eye test.



Navy Motion Picture Service Makes History Come Alive

JOHN PAUL JONES MEETS

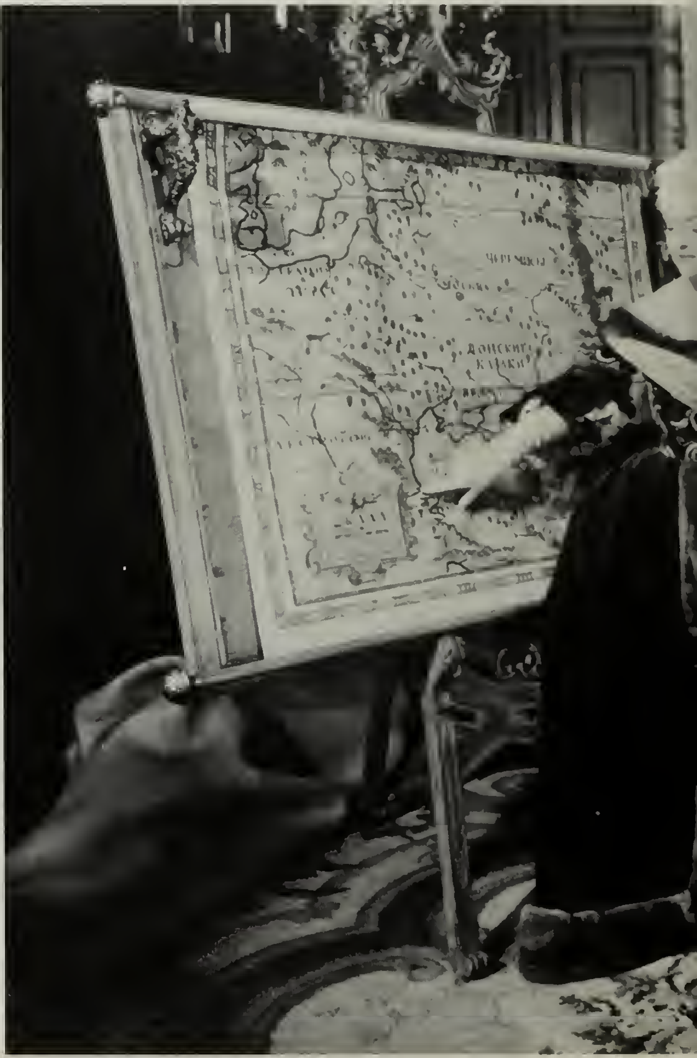
The Navy Motion Picture Service (NMPS), Brooklyn, N. Y., is offering its contribution to the Navy's Bicentennial program by procuring several prints each of 50 movies which have some bearing on American history. (See ALL HANDS, May 1975.)

From time to time, the movie industry has produced films reflecting a period or incident associated with our history. The most prolific of such films center on the World War II era.

The colonial, Revolutionary War, War of 1812 and subsequent periods through the 1830s have been somewhat neglected by Hollywood. This is also true of the World War I period which is represented in some silent movies and in a couple of sound and talkie movies which are difficult to procure.

In that context, the Navy Motion Picture Service zealously combed all sources for historical movies. Some of those chosen were no longer available because of the lack of pre-print material. Accordingly, these had to be eliminated because the cost to reproduce them would have been staggering.

The following list of 50 does not represent all films



CATHERINE THE GREAT

to be made available in the Bicentennial program. During this fiscal year, NMPS will attempt to procure a further sampling of our country's heritage as portrayed on film. Some silent greats of World War I will be procured, as well as movies reflecting our country's culture, including its inventors, music, sports figures and other greats.

This listing of the first 50 includes the stars of yesterday and today who appeared in them. A short synopsis is also given and reference is made to any awards the films earned. The films were scheduled for issue in November and are available on a direct request basis from NMPS Brooklyn.

SUTTER'S GOLD (1936) (B&W) 75 min., starring Edward Arnold, Lee Tracy and Binnie Barnes. The story is a historical recreation of the discovery of gold at Sutter's Mill in California and the subsequent gold rush of 1849.

UNION PACIFIC (1939) (B&W) 135 min., starring Barbara Stanwyck, Joel McCrea, Akim Tamiroff, Robert Preston and Anthony Quinn. Produced by Cecil B. DeMille, it portrays the epic drama of the building of the transcontinental railroad and the drive to Promontory Point linking the West with the East. This movie is packed with action and features a spectacular train wreck and some of the most exciting Indian attacks ever filmed.

THE PLAINSMAN (1936) (B&W) 113 min., starring Gary Cooper, Jean Arthur, James Ellison and Charles Bickford. Produced by Cecil B. DeMille. Wild Bill Hickok, Calamity Jane, Buffalo Bill, Abraham Lincoln, George Custer and others appear on the screen in this epic DeMille western. The story concerns the hunt to get a man who was responsible for selling guns to the Indians which culminates in Custer's massacre. It centers on the career of Wild Bill Hickok, his love for Calamity Jane, his friendship with Buffalo Bill Cody and his murder at the hands of the infamous Jack McCall.

TO HELL AND BACK (1955) (Color) 106 min., starring Audie Murphy, Marshall Thompson and Susan Kohner. This is a true story, based on the autobiography of Audie Murphy, whose incredible exploits in the European Theater made him the most decorated American soldier of World War II.

REAP THE WILD WIND (1942) (Color) 124 min., starring John Wayne, Ray Milland, Paulette Goddard, Raymond Massey, Robert Preston, Susan Haywood, Charles Bickford and Hedda Hopper. One of Cecil B. DeMille's most spectacular productions, dealing with piracy in the salvage business off Key West in the 1860s. The shipwreck scenes are awesome, and the giant octopus that signals the climax is one of the most

Far left: A statue of John Paul Jones. Left: A scene from the movie "John Paul Jones" with Robert Stack in the title role and Bette Davis in a special cameo appearance as Catherine the Great. The movie is offered by the Navy Motion Picture Service as one of 50 revivals during the Nation's Bicentennial celebration.

impressive screen monsters of all time. This motion picture won the 1942 Academy Award for Best Special Effects.

SHENANDOAH (1965) (Color) 105 min., starring James Stewart, Doug McClure, Katherine Ross, Glen Corbett and Patrick Wayne. The tragic story of a Virginia family that tries to remain neutral during the Civil War. James Stewart, an embittered farmer, becomes involved, however, when his only daughter becomes engaged to a Confederate soldier. This film was a Blue Ribbon Award winner and was chosen as one of Filmdom's Famous Fives for 1965.

UNCONQUERED (1947) (Color) 148 min., starring Gary Cooper, Paulette Goddard, Howard DaSilva and Boris Karloff. This Cecil B. DeMille production takes place in colonial America of 1763. It is the story of underhanded attempts to prevent extension of our frontier past the Alleghenies. The climax of the film is a spectacular Indian attack on beleaguered Fort Pitt. Gary Cooper, a fearless captain from Virginia, is the hero who befriends Paulette Goddard, a transported bondswoman who was sold into slavery. Another highlight of this historical film is a spectacular plunge over a waterfall.

THE STORY OF DR. WASSELL (1944) (Color) 136 min., starring Gary Cooper, Lorraine Day and Signe Hasso. A true story about the heroic Navy Doctor Roydon M. Wassell who evacuated wounded soldiers from Java to Australia during World War II. His incredible journey is punctuated by amazing battle scenes in the most spectacular manner of Cecil B. DeMille who directed the film. This is an outstanding World War II drama which was nominated for an Academy Award in 1944.

GERONIMO (1939) (B&W) 90 min., starring Preston Foster, Ellen Drew, Andy Devine and Gene Lockhart. The story of Geronimo, who led the Apaches in their war against the government.

WELLS FARGO (1937) (B&W) 116 min., starring Joel McCrea, Francis Dee, Johnny Mack Brown and Robert Cummings. Lavish action, filled with drama, of the building of the Wells Fargo Express service.

AWAY ALL BOATS (1956) (Color) 114 min., starring Jeff Chandler, George Nader and Julie Adams. The story of a tough skipper of a Navy attack transport who molds his inexperienced crew into an efficient and courageous fighting unit during the Pacific island-hopping campaign of World War II. There are many exciting battle scenes.

THE FAR COUNTRY (1955) (Color) 97 min., starring James Stewart, Ruth Roman, Walter Brennan, Jay C. Flippen and John McIntire. The story of a cattleman who brings a herd of cattle to Alaska during the gold rush days. His cattle taken away by a lawless element, he fights to recover his herd, at the same time cleaning up Dawson. The background of the story is the Yukon frontier and the brutal war for control of the Alaskan gold fields.

SANTA FE TRAIL (1940) (B&W) 110 min., starring Errol Flynn, Olivia De Haviland, Ronald Reagan, Raymond Massey, Van Heflin and William Lundigan. This movie tells of the antebellum fight for "bloody Kansas." The capture and hanging of John Brown are depicted, along with the beginning of the military careers of Jeb Stuart and George Custer.

THE ALAMO (1960) (Color) 190 min., starring John Wayne, Richard Widmark, Laurence Harvey, Frankie Avalon, Patrick Wayne, Linda Cristal and Richard

Boone. Historical drama of the 1836 Texas revolt against Mexico and of the gallant men who fought to the last man to gain time by holding off the advancing Mexican Army at the Alamo. Academy Award 1960 for Best Sound Recording.

RUN SILENT, RUN DEEP (1958) (B&W) 92 min., starring Clark Gable, Burt Lancaster, Jack Warden and Don Rickles. Action-packed World War II submarine warfare drama showing operations off waters of Japan.

DEVIL'S DISCIPLE (1959) (B&W) 82 min., starring Burt Lancaster, Laurence Olivier and Kirk Douglas. Tale of adventure, patriotism and love during the American Revolution on the eve of British General John Burgoyne's defeat at the Battle of Saratoga. Based on the play by George Bernard Shaw.

THEY DIED WITH THEIR BOOTS ON (1942) (B&W) 140 min., starring Errol Flynn and Olivia De Haviland. A rousing tale of General Custer's famous last stand against Chief Sitting Bull and of the events leading up to the Battle of Little Big Horn.

HORSE SOLDIERS (1959) (Color) 119 min., starring John Wayne, William Holden and Constance Towers. Story of Col. Grierson's Union Cavalry raid into Confederate territory in 1863.

BILLY THE KID (1941) (Color) 95 min., starring Robert Taylor, Ian Hunter, Brian Donlevy and Mary Howard. Story of the infamous outlaw who supposedly outdrew all but one man. It shows the period of his life when he tried to stay within the law and then the events leading to his death.

RED BADGE OF COURAGE (1951) (B&W) 69 min., starring Audie Murphy, Bill Mauldin, Douglas Dick and Royal Dano. This is Stephen Crane's Civil War classic of a young union soldier who panics in his first meeting with enemy soldiers but then regains his courage and goes on to become a hero.

THE TALL TARGET (1951) (B&W) 78 min., starring Dick Powell, Paula Raymond, Adolphe Menjou, Will Geer, Marshall Thompson, Ruby Dee and Richard Robes. In 1861, there is a plot to kill President-elect Abraham Lincoln on his way to Washington, D. C. A New York detective, discovering the plot, goes all out to prevent the assassination.

YELLOW JACK (1938) (B&W) 83 min., starring Robert Montgomery, Lewis Stone and Virginia Bruce. Story of how the U. S. Army fought and conquered yellow fever in 1900.

NORTHWEST PASSAGE (1940) (Color) 126 min., starring Spencer Tracy, Robert Young, Ruth Hussey and Walter Brennan. Pre-American Revolutionary War story of the adventures of Major Richard Rogers' Rangers expedition searching for the now-mythical Northwest Passage. One of the 10 best pictures of 1940.

HOW THE WEST WAS WON (1963) (Color) 162 min., starring James Stewart, Debbie Reynolds, Carroll Baker, Karl Malden, Agnes Moorehead, Walter Brennan and Gregory Peck. A panorama dealing with America's westward expansion during the period 1839 to 1889 as seen through the eyes of three generations of pioneers.

RAINTREE COUNTY (1958) (Color) 166 min., starring Elizabeth Taylor, Montgomery Clift, Eva Marie Saint and Lee Marvin. Lives, problems, frustrations, desires and accomplishments of three young people in Raintree County, Ind., during the Civil War. Awards: Montgomery Clift (Best Actor), Elizabeth Taylor (Best Actress), Eva Marie Saint (Best Supporting Actress), Best Photographed Picture.

GORGEOUS HUSSY (1936) (B&W) 105 min., starring Joan Crawford, Franchot Tone, Robert Taylor and Lionel Barrymore. An innkeeper's daughter, in becoming a "friend" of Andrew Jackson, sacrifices her hus-

Left to right: Robert Stack in a scene from "John Paul Jones." Captain Jones sends his men over the side. First aid for World War II wounded on beach is depicted in this scene from "Away All Boats." Below: This is an actual historical photo of D-Day landing on the French coast. The landings were depicted in the movie "The Longest Day," which is one of the movies provided by the Navy Motion Picture Service on subjects associated with incidents in American history.

band and other friends, finally causing her to go into exile.

TENNESSEE JOHNSON (1943) (B&W) 102 min., starring Van Heflin, Ruth Hussey and Lionel Barrymore. Historical drama of Andrew Johnson who succeeded Lincoln.

BATTLEGROUND (1949) (B&W) 118 min., starring Van Johnson, John Hodiak, James Whitmore, George Murphy, Ricardo Montalban, Denise Darnell and James Arness. World War II story of the men of the 101st Airborne Division, "E" Company, and the historic "Battle of the Bulge" in December 1944. Ranked with the best films of World War II. Academy Award 1949 Best Story and Screenplay and Best Cinematography.

SAN FRANCISCO (1936) (B&W) 117 min., starring Clark Gable, Spencer Tracy, Jeannette McDonald, Jack Holt, Jessie Ralph, Ted Healy, Shirley Ross and Al Shean. San Francisco, 1905. A love story of a powerful Barbary Coast gambler and saloon owner, and a young singer, reaches an apex in the devastating 1906 San Francisco earthquake and fire. Academy Award in 1936 for Best Sound Recording and voted one of the 10 best pictures of the year.

PLYMOUTH ADVENTURE (1952) (Color) 105 min., starring Spencer Tracy, Gene Tierney, Van Johnson, Leo Genn and Dawn Addams. Story of the voyage of *Mayflower* and her landing in Massachusetts in 1620, in which is mingled the love story of Priscilla Mullens and John Alden.

JOHN PAUL JONES (1959) (Color) 126 min., starring Robert Stack, MacDonald Carey, Marisa Pavan, Charles Coburn and Erin O'Brien. Historical biographical drama of John Paul Jones and his valiant fight for a strong American Navy and the part he took in America's fight for independence. Bette Davis has a cameo role as Catherine the Great of Russia whom Jones met after the Revolution.

LAFAYETTE ESCADRILLE (1958) (B&W) 93 min., starring Tab Hunter, David Janssen, Brett Halsey and Jody McCrea. The exciting story of the volunteer flight squadron, made up of Americans, that served in France in World War I.

BATTLE OF THE BULGE (1966) (Color) 158 min., starring Henry Fonda, Robert Shaw, Robert Ryan, Dana Andrews and Pier Angeli. In December 1944, an American lieutenant colonel, realizing German weakness is lack of gasoline, suggests that the commanding general and his men play a game of hide-and-seek with the enemy, thus depleting their gas supply.

DRUMS ALONG THE MOHAWK (1939) (Color) 104 min., starring Henry Fonda, Claudette Colbert, John Carradine, James Craig and Guy Madison. Pre-Revolutionary American adventure story of the Mohawk Trail in New York State with colonists and British Redcoats fighting bloody battles against Indians.

THE PRESIDENT'S LADY (1953) (B&W) 96 min., starring Charlton Heston, Susan Hayward and Fay Bainter. A story about the scandal that clung to Rachel, the wife of Andrew Jackson and the future president's efforts to clear her name.

THE LONGEST DAY (1962) (B&W) 179 min., starring John Wayne, Richard Burton, Henry Fonda, Robert Mitchum, Robert Ryan, Rod Steiger, etc. Story of D-Day in World War II as seen through the eyes of the Americans, French, British and Germans. Academy Award 1962 for Best Special Effects and Best Black & White cinematography. Chosen as one of 10 best movies of 1962.

TWELVE O'CLOCK HIGH (1949) (B&W) 132 min., starring Gregory Peck, Dean Jagger, Hugh Marlowe, Gary Merrill and Paul Stewart. Story of a young general who in 1942 takes command of a bomber group operating from England and raises it from bleak depression to a high-morale, courageous fighting team. Academy Awards 1949 for Gregory Peck as Best Male Performer, Dean Jagger for Best Supporting Actor; Best Sound Recording. Also received Film Critics Award for 1950.

YOUNG MR. LINCOLN (1939) (B&W) 100 min.,

starring Henry Fonda and Alice Brady. The story of Lincoln's early years, beginning in 1832 when he starts out as a young lawyer.

BRIGHAM YOUNG (1940) (B&W) 112 min., starring Tyrone Power, Linda Darnell, Dean Jagger and Brian Donlevy. The story of the great Mormon leader who led his people to a new land, now Salt Lake City, Utah.

BUFFALO BILL (1944) (Color) 89 min., starring Joel McCrea, Linda Darnell, Maureen O'Hara and Thomas Mitchell. The story of William F. Cody (Buffalo Bill), his career as a guide and buffalo hunter, his efforts to make peace with the Indians, his marriage, his downfall and, finally, his comeback.

MY DARLING CLEMENTINE (1946) (B&W) 98 min., starring Henry Fonda, Linda Darnell, Victor Mature and Walter Brennan. This is a classic western about Wyatt Earp and Doc Holliday.

CENTENNIAL SUMMER (1946) (Color) 102 min., starring Jeanne Crain, Cornel Wilde, Linda Darnell, Walter Brennan, Constance Bennett and Dorothy Gish. This is a story of the adventures, and misadventures, of a Philadelphia family during the Centennial Exposition of 1876.

THE STORY OF ALEXANDER GRAHAM BELL (1939) (B&W) 98 min., starring Don Ameche, Loretta Young, Henry Fonda, Gene Lockhart and Charles Coburn. This is the story of the telephone inventor's life, his discouraging struggles, his battle against public ridicule and his ultimate triumph.

IN OLD CHICAGO (1938) (B&W) 95 min., starring Tyrone Power, Alice Faye, Don Ameche, Alice Brady, Brian Donlevy. This is an epic story of Chicago's history and about the O'Learys whose cow supposedly started the Chicago fire. Academy Award for Best Supporting Actress, Alice Brady. Ten Best list of 1938.

THE FAR HORIZONS (1955) (Color) 108 min., starring Charlton Heston, Fred MacMurray, Donna Reed and Barbara Hale. This is the story of the historic Lewis and Clark Expedition which was sent out by then-President Thomas Jefferson to map the Louisiana Territory purchased from France in 1803.

THE BUCCANEER (1958) (Color) 121 min., starring Yul Brynner, Charlton Heston, Claire Bloom, Inger Stevens, Charles Boyer and E. G. Marshall. This is the story of the Battle of New Orleans in the War of 1812. General Andrew Jackson needed more troops and munitions. Pirate Jean Lafitte came to his aid and helped General Jackson win an overwhelming victory. The battle scenes are outstanding.

PONY EXPRESS (1953) (Color) 101 min., starring Charlton Heston, Rhonda Fleming, Jan Sterling and Forrest Tucker. In 1860, Buffalo Bill Cody and Wild Bill Hickok join forces to establish a fast, direct mail route from the Missouri plains to the Pacific.

TRIPOLI (1950) (Color) 95 min., starring Maureen O'Hara, John Payne, Howard DaSilva, Philip Reid and Grant Withers. War between the United States and the Tripoli pirates in 1805 sets the scene for battle as the Marines fight to raise the American flag on Tripoli.

THE SCARLET COAT (1955) (Color) 101 min., starring Cornel Wilde, Michael Wilding, George Sanders and Anne Francis. This is a Revolutionary War espionage story told against the background of General Benedict Arnold's betrayal of the American cause.

BARBARIAN AND THE GEISHA (1958) (Color) 105 min., starring John Wayne, Echo Ando and Sam Jaffee. Historical drama of one man's successful fight to open Japan to the Western World.

Far left: A historical painting depicting Commodore Perry's visit to Japan in 1852. Left: John Wayne, portrayed as the first American Ambassador to Japan in "The Barbarian and the Geisha." Above right: "Battle of Tripoli," a painting by Michaele Corne, courtesy of the Naval Academy Museum. Right: Scene from the motion picture "Tripoli."

ALNAV PUZZLE

ALL HANDS has printed one puzzle on general Navy terminology and one on Navy ships. So, a few airdales thought it was about time the puzzles took to the air. Here is a puzzle for the enjoyment, education and occasional frustration of watchstanders throughout the Navy and those people who truly enjoy a challenge. It was prepared by AW2 J. D. Fink, with information given by AW1 R. C. Sullivan. Both are members of PatRon Six Eight, Patuxent River, Md.

The puzzle includes at least 33 names of aircraft used by the U. S. Navy in one way or another during World War II. The rules are as before; circle the name in any direction, fore or aft or diagonally. Do not use abbreviations.

Got your hardhat? Ready for taxi? Pull the chocks!

For those not in naval aviation, we offer some help. Printed below, upside-down, are the names of aircraft included in the puzzle. Try it first without this aid.

S	E	S	O	O	G	Q	D	U	C	K	H	A	S	S	E	L	T	N	U	A	D
D	P	E	Z	I	D	N	V	J	I	Z	T	C	W	W	O	C	A	X	Z	I	E
W	I	A	P	T	A	C	L	L	E	H	U	O	B	T	D	O	Q	L	B	P	V
V	F	Y	R	F	L	F	Z	W	D	J	A	V	V	R	F	R	H	I	W	S	A
T	I	G	E	R	C	A	T	A	L	I	N	A	U	Z	Y	S	J	B	T	B	S
F	Y	W	J	H	O	E	Q	Q	P	R	F	H	Q	T	E	A	L	E	L	U	T
I	B	L	A	C	K	W	I	D	O	W	N	L	S	A	W	I	A	R	O	F	A
N	K	H	T	Z	S	P	H	D	Z	D	T	U	H	J	O	R	E	A	K	F	T
K	N	B	U	S	K	X	R	A	R	L	P	A	Z	V	M	F	P	T	X	A	O
S	E	A	G	U	L	L	W	Q	W	A	W	W	C	A	Y	S	A	O	B	L	R
L	Q	Y	X	L	L	O	H	F	K	K	L	H	N	O	F	Z	Y	R	N	O	H
X	T	A	C	L	E	V	J	U	I	Z	N	L	C	V	Q	X	N	H	G	E	A
W	I	V	N	I	H	D	O	N	A	V	I	G	A	T	O	R	E	O	L	H	A
E	J	E	R	V	C	B	G	D	Y	W	K	Z	S	M	H	B	F	L	O	A	T
R	O	N	T	A	T	F	Q	T	U	J	T	M	A	R	A	U	D	E	R	R	E
A	Q	G	J	N	I	V	E	X	B	Y	V	F	E	Y	M	I	D	S	H	P	K
T	K	E	A	S	M	Y	M	A	R	I	N	E	R	V	V	E	I	W	T	O	C
S	I	R	H	U	T	Z	W	Q	P	L	Z	P	P	E	G	V	N	D	Q	O	O
E	P	E	P	W	H	E	L	O	X	Y	V	S	R	F	U	X	O	T	A	N	R
D	R	R	V	J	V	V	X	R	E	T	S	A	M	Y	K	S	L	Y	O	D	Y
O	Z	Z	S	K	Y	T	R	A	I	N	I	D	U	V	H	Q	J	P	Z	R	K
L	W	W	I	L	D	C	A	T	N	K	R	E	E	T	A	V	I	R	P	N	S

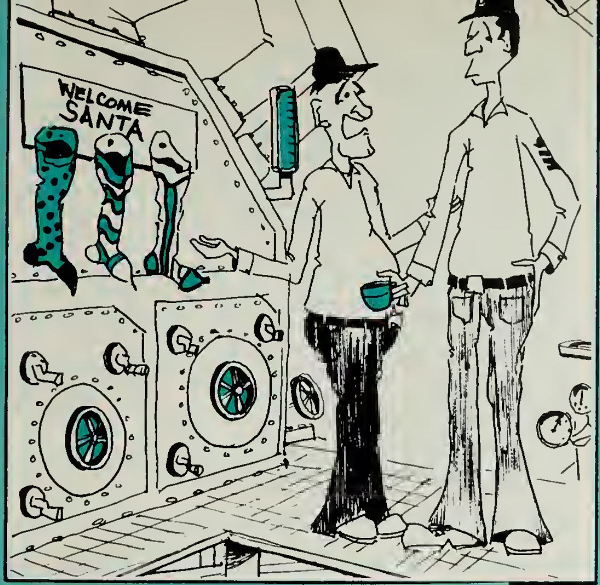
AVENGER
BLACK WIDOW
BUFFALO
CATALINA
CORSAIR
DAUNTLESS
DEVASTATOR
DUCK
GOOSE
HARPOON
HAVOC
HELLCAT
HELLDIVER
KINGFISHER
LIBERATOR
LODESTAR
MALLARD
MARAUDER
MARINER
MENTOR
MITCHELL
NAVIGATOR
PRIVATEER
SEAGULL
SEAHAWK
SKYMASTER
SKYROCKET
SKYTRAIN
SPARROWHAWK
STEARMAN
TEXAN
TIGERCAT
WILDCAT

Ship Reunions

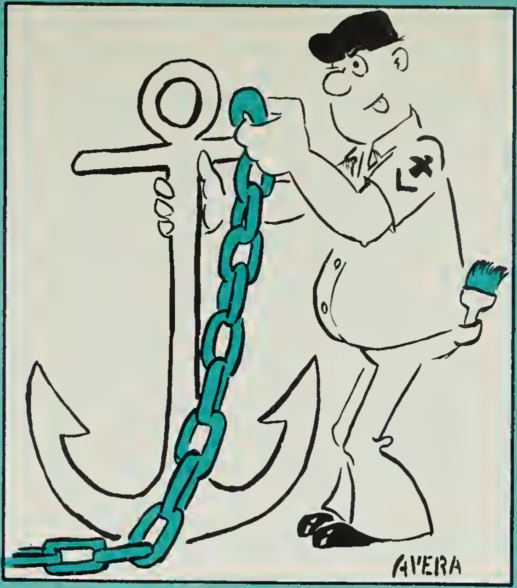
News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Navy Internal Relations Activity, Department of the Navy, Room 1044, Crystal Plaza No. 6, 2221 Jefferson Davis Highway, Washington, D. C. 20360, four months in advance.

- USS *Cascade (AD 16)*—Reunion planned for those who served in her from 1951-1954. To be held 6-7 Aug 1976 at Philadelphia. Contact Bob Croghan, 2343 Hampton, St. Louis, Mo. 63139 for further information.
- USS *Henley (DD 391)*—Reunion planned for those who served in her. To be held 16-18 Jul 1976 near Brainerd, Minn. Contact Roy E. Anglen, P.O. Box 3, Hume, Ill. 61932.
- USS *Kretchmer (DE/DER 329)*—Reunion proposed for those who served in her from 1943-1973. Contact A. M. Wilson, 225 S. Central Ave., Highwood, Ill. 60040. Please include two first class postage stamps for reply.
- USS *LST 716*—Reunion planned for those who served in her at Iwo Jima in 1945. Contact Winthrop E. Hamilton, P.O. Box 244, Dover, N. H. 03820.
- USS *Houston (CA 30 & CL 81)*—Reunion planned for POWs who were survivors of the first USS *Houston* in conjunction with memorial to be dedicated to the two USS *Houston* cruisers. Reunion to be held 28-30 May 1976 in Houston, Tex. Contact the Cruisers USS Houston Memorial Committee, P.O. Box 66244, Houston, Tex. 77006.
- USS *Levy (DE 162)*—Reunion proposed for those who served in her from July 1943 to decommissioning. Contact John E. McCullough, P.O. Box 94, Sergeantsville, N. J. 08557.

serious on the side



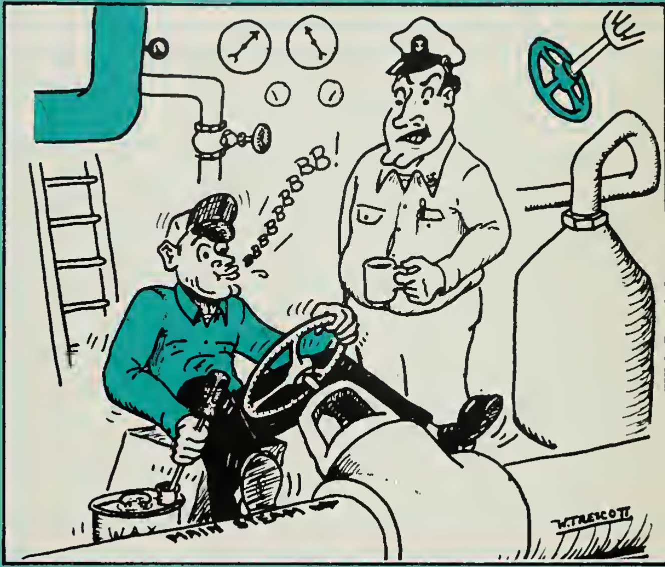
"Well, it's sort of like a fireplace. . . ."



"Easy does it."

BM2 Bruce Mitchell Lowe

William H. Trescott, III



"Wilcox, haven't you ever heard of standing a watch in a military manner?. . . . Wilcox!"

LTJG John S. Miller

"Ball, Claus."

WE WISH YOU A MERRY CHRISTMAS AND A HAPPY NEW YEAR

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